Acer
Aspire R3610
Service Guide

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Revision History

Please refer to the table below for the updates made on this service guide.

Date	Chapter	Updates

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Conventions

The following conventions are used in this manual:

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives additional information related to the current topic.
WARNING	Alerts you to any physical risk or system damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

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Service Guide Coverage

This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

FRU Information

Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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System Tour

Features

Below is a brief summary of the computer's many feature:

NOTE: The features listed in this section is for your reference only. The exact configuration of the system depends on the model purchased.

Operating System

- Microsoft Windows 7 Home Premium X64
- Microsoft Windows 7 Home Premium X32 (by request)
- Microsoft Windows 7 Home Basic (by request)
- Linpus Linux X-windows version
- Free Dos

Processor

- Socket Type: None
- Processor Type:
  - Intel Atom 330
  - TDP below 8W(include 8W)

Chipset

- Single chip :Nvidia MCP7A-ION

PCB

- 170mm*170mm (Proprietary)

Memory subsystem

- Memory Type: DDRII SO-DIMM 800
- Single channel for 1 SO-DIMM SKU
- Dual channel support for reserved 2 SO-DIMM SKU
- DIMM Slot: 2
- Capacity support:
  - 512MB / 1GB / 2GB DDRII 800 SO-DIMM support
  - 512MB to 4GB Max memory support
- Design Criteria:
  - Should meet NV Chipset platform design guide
  - Dual channel should be enabled always when plug-in 2 same memory size DDRII memory module
  - Should meet NV Chipsets Family BIOS Specification

Graphic solution

- NV MCP7A-ION on die graphic solution (GF9400)

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- One D-sub port and One HDMI (Type-A) port
- Dual View function support
- Meet Microsoft Vista Premium graphic requirement

Hard disk

- Support up to one SATA ports
- 2.5"
- Capacity and models are listed on AVLC

Optical disk

- None

Serial ATA controller

- Slot Type: SATA connector
- Slot Quantity: 1
- Storage Type support: AHCI mode supported for internal SATA port
- Slot Type :e-SATA connector :
  - One e-SATA support on front

Audio

- Chip : Realtek ALC662
- Connectors support:
  - Audio jacks color coding: should meet Microsoft Windows Logo Program Device Requirements: Audio-0002
  - Front 2 jack follow HD audio definition
  - Add HD de-pop CKT

LAN

- Controller: Realtek 8211CL
- Port: 1 x RJ45 rear port for Gigabit Ethernet

USB ports

- Controller: NV MCP7A-ION
- 4 back panel ports
- 2 ports for front daughter board
- Connector Pin: standard Intel FPIO pin definition
- USB 2.0/1.1Data transfer rate support

Extension slot

- Support one Mini PCIe slot

Total I/O ports

- One HDMI output in real I/O
- One D-sub output in real I/O
- Four USB in real I/O
- One RJ45 in real I/O

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- One DC-in jack in real I/O
- One e-SATA port in front bezel
- One HD headphone output in front bezel
- One MIC-IN in front bezel
- Tow USB in front bezel
- One card reader (4 in 1: XD/SD/MMC/MS) in front bezel
- One S/PDIF port

System BIOS

- BIOS Type: AMI Kernel with Acer skin
- Size: 8Mb(depend on chipset BIOS programming guide)
- Note:
  - Boot ROM should be included (PXE function should be built in with default and RPL function is optional by service BIOS)

Adapter

- Universal AC adapter, 90~264V AC, 47~63HZ
- 3-pin 65W with 19VDC output
- Small DC jack
- Energy Star5.0 support

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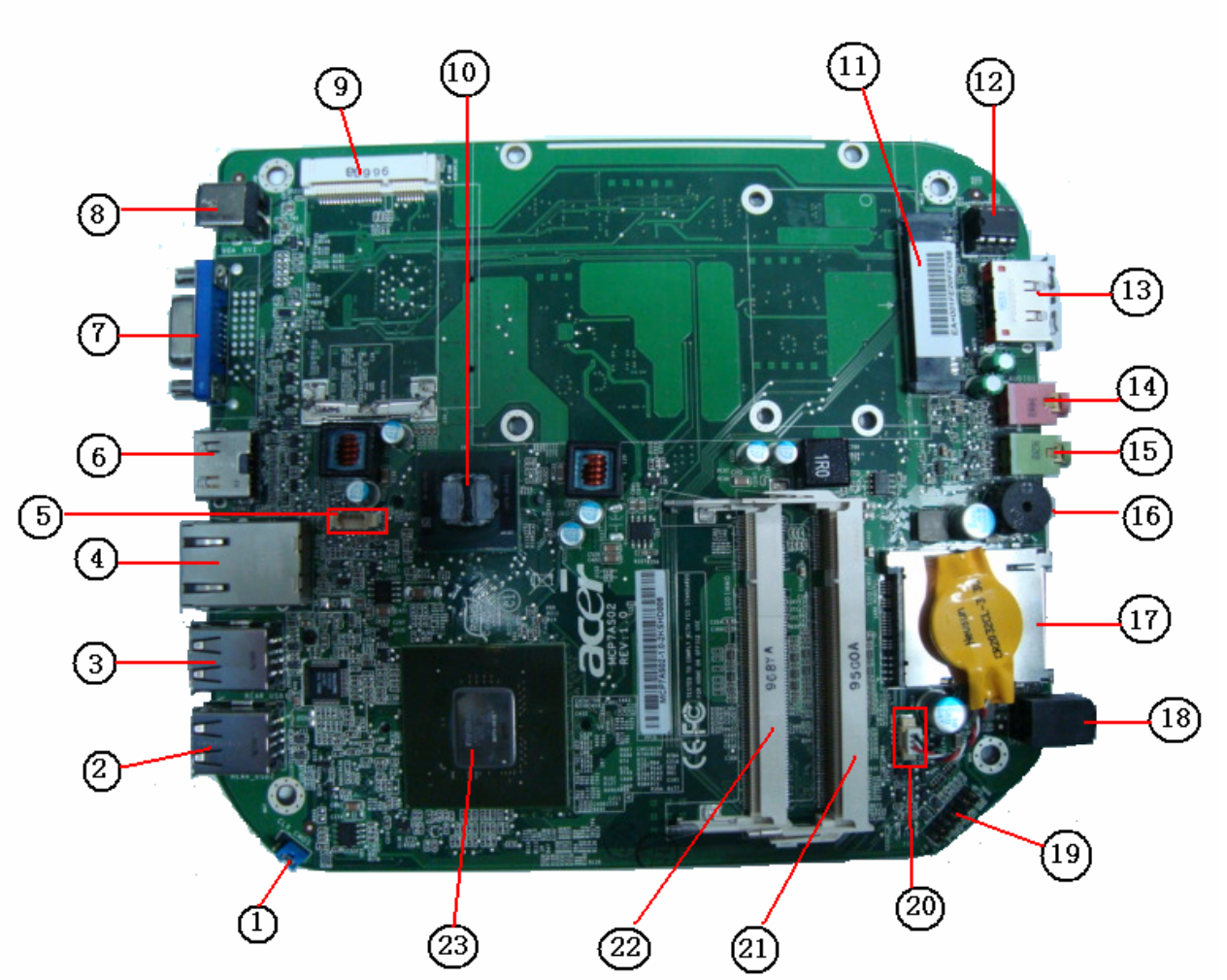
M/B Placement



No	Label	Description	No	Label	Description
1	CLR_CMOS	Clear CMOS header and jumper	13	ESATA	External SATA
2	Rear_USB2	Rear USB ports	14	MIC IN	Audio mic-in connector
3	Rear_USB1	Rear USB ports	15	Line out	Audio line-out connector
4	LAN CONN	Lan connector	16	Buzzer	Buzzer,Transductor,5V,40mA,2W,
5	SYS_FAN	System fan header	17	Card reader	CONN,Flash Memory Card
6	HDMI	HDMI connector	18	SPDIF	SPDIF header
7	VGA	VGA connector	19	Front Panel	Front Panel header
8	DCIN CONN	19V DC power in connector	20	BAT header	Battery header
9	MiniPCIE	miniPCIE connector	21	SODIMM1	CONN,DIMM,DDR II,SMD-200
10	CPU	IC,INTEL, Atom N330	22	SODIMM0	CONN,SO-DIMM,DDR II,SMD-200
11	SATA HDD	SATA HDD connector	23	MCP7A	IC,NVIDIA,MCP7A-ION-B2
12	SPI ROM	SPI ROM socket			

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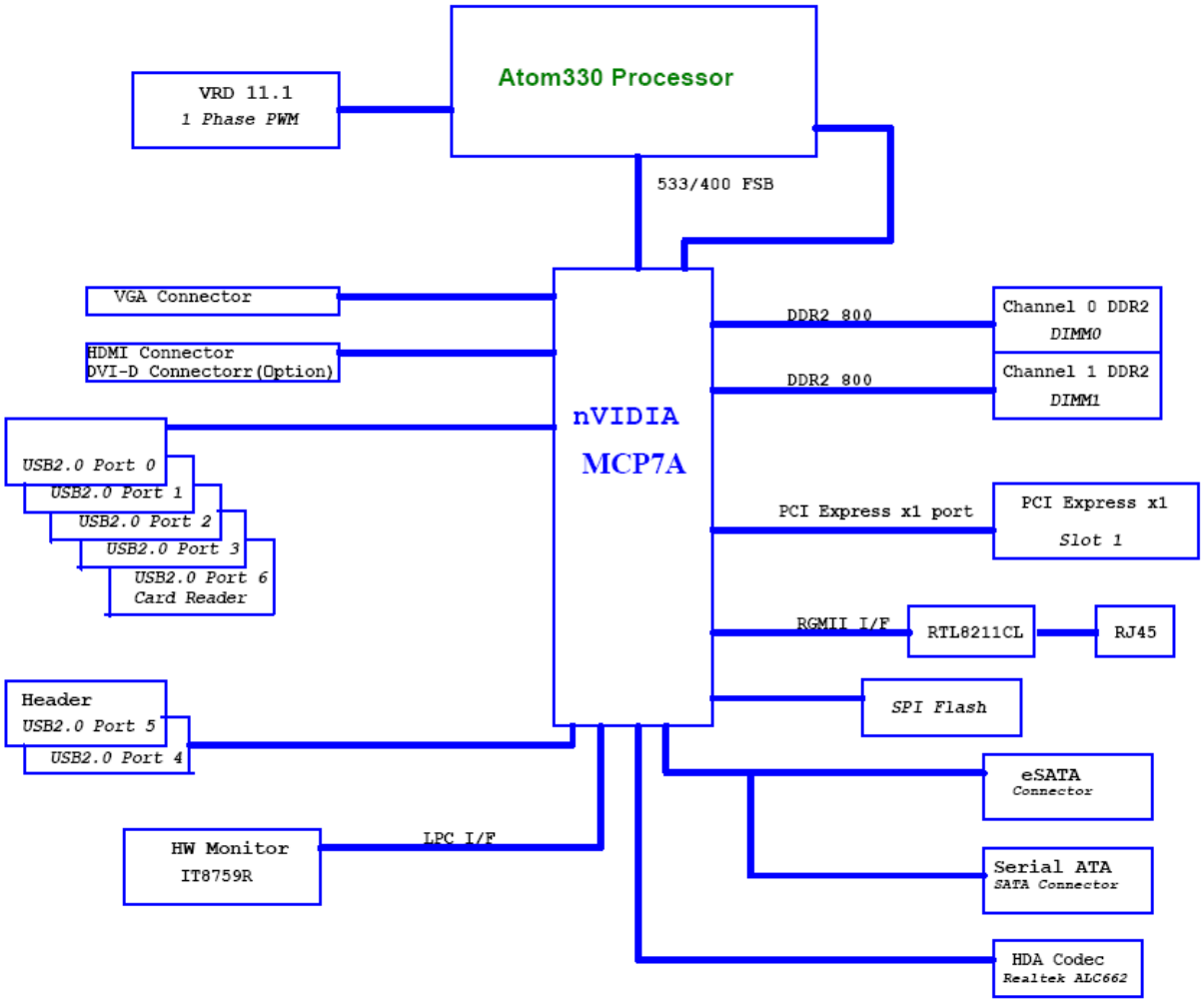
Block Diagram



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System Components

This section is a virtual tour of the system's interior and exterior components.

Front Panel

No.	Component
1	e-SATA port
2	Microphone-in jack
3	Headphone/Speaker-out/line-out jack
4	Media card reader (4 in 1: XD/SD/MMC/MS)
5	SPDIF
6	Acer Logo
7	USB 2.0 port
8	Power Button
9	USB 2.0 port

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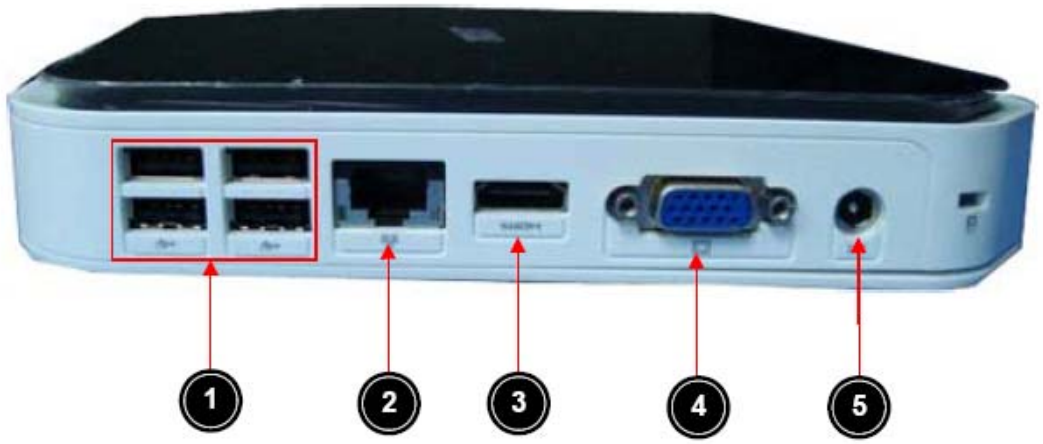
Rear Panel



No.	Component
1	4 X USB 2.0 port
2	LAN Connector
3	HDMI Connector
4	D-sub Connector
5	DC-in Jack

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Power Management Function(ACPI support function)

Device Standby Mode

- Independent power management timer for hard disk drive devices(0-15 minutes,time step=1minute).
- Hard Disk drive goes into Standby mode(for ATA standard interface).
- Disable V-sync to control the VESA DPMS monitor.
- Resume method:device activated (keyboard for DOS, keyboard &mouse for Windows.
- Resume recovery time 3-5sec.

Global Standby Mode

- Global power management timer(2-120minutes,time step=10minute).
- Hard disk drive goes into Standby mode(for ATA standard interface).
- Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- Resume method: Resume to original state by pushing external switch Button,modem ring in,keyboard an mouse for APM mode.
- Resume recovery time :7-10sec

Suspend Mode

- Independent power management timer(2-120minutes,time step=10minute)or pushing extern switch button.
- CPU goes into SMM
- CPU asserts STPCLK# and goes into the Stop Grant State.
- LED on panel turns amber colour.
- Hard disk drive goes into SLEEP mode (for ATA standard interface).
- Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- Ultra I/O and VGA chip go into power saving mode.
- Resume method: Resume to original state by pushing external switch Button,modem ring in,keyboard an mouse for APM mode
- Return to original state by pushing external switch button,modem ring inand USB keyboard for ACPI mode.

ACPI

- ACPI specification 1.0b
- S0,S1,S2 and S5 sleep state support.
- On board device power management support.
- On board device configuration support.

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Chapter 2

System Utilities

CMOS Setup Utility

CMOS setup is a hardware configuration program built into the system ROM, called the complementary metal-oxide semiconductor (CMOS) Setup Utility. Since most systems are already properly configured and optimized, there is no need to run this utility. You will need to run this utility under the following conditions.

- When changing the system configuration settings
- When redefining the communication ports to prevent any conflicts
- When modifying the power management configuration
- When changing the password or making other changes to the security setup
- When a configuration error is detected by the system and you are prompted ("Run Setup" message) to make changes to the CMOS setup

NOTE: If you repeatedly receive Run Setup messages, the battery may be bad. In this case, the system cannot retain configuration values in CMOS. Ask a qualified technician for assistance.

CMOS setup loads the configuration values in a battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM which allows configuration data to be retained when power is turned off.

Before you run the *CMOS* Setup Utility, make sure that you have saved all open files. The system reboots immediately after you close the Setup.

NOTE: *CMOS* Setup Utility will be simply referred to as “BIOS”, "Setup", or "Setup utility" in this guide.

The screenshots used in this guide display default system values. These values may not be the same those found in your system.

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Entering CMOS setup

1. Turn on the server and the monitor.

   If the server is already turned on, close all open applications, then restart the server.

2. During POST, press **Delete**.

   If you fail to press **Delete** before POST is completed, you will need to restart the server.

   The Setup Main menu will be displayed showing the Setup's menu bar. Use the left and right arrow keys to move between selections on the menu bar.

Navigating Through the Setup Utility

Use the following keys to move around the Setup utility.

- **Left** and **Right** arrow keys – Move between selections on the menu bar.
- **Up** and **Down** arrow keys – Move the cursor to the field you want.
- **PgUp** and **PgDn keys** – Move the cursor to the previous and next page of a multiple page menu.
- **Home** – Move the cursor to the first page of a multiple page menu.
- **End** – Move the cursor to the last page of a multiple page menu.
- **+** and **-** keys – Select a value for the currently selected field (only if it is user-configurable). Press these keys repeatedly to display each possible entry, or the **Enter** key to choose from a pop-up menu.

NOTE: Grayed-out fields are not user-configurable.

- **Enter** key – Display a submenu screen.

NOTE: Availability of submenu screen is indicated by a (>).

- **Esc** – If you press this key:
  - On one of the primary menu screens, the Exit menu displays.
  - On a submenu screen, the previous screen displays.
  - When you are making selections from a pop-up menu, closes the pop-up without making a selection.
- **F1** – Display the General Help panel.
- **F6** – Press to load optimized default system values.
- **F7** – Press to load fail-safe default system values.
- **F10** – Save changes made the Setup and close the utility.

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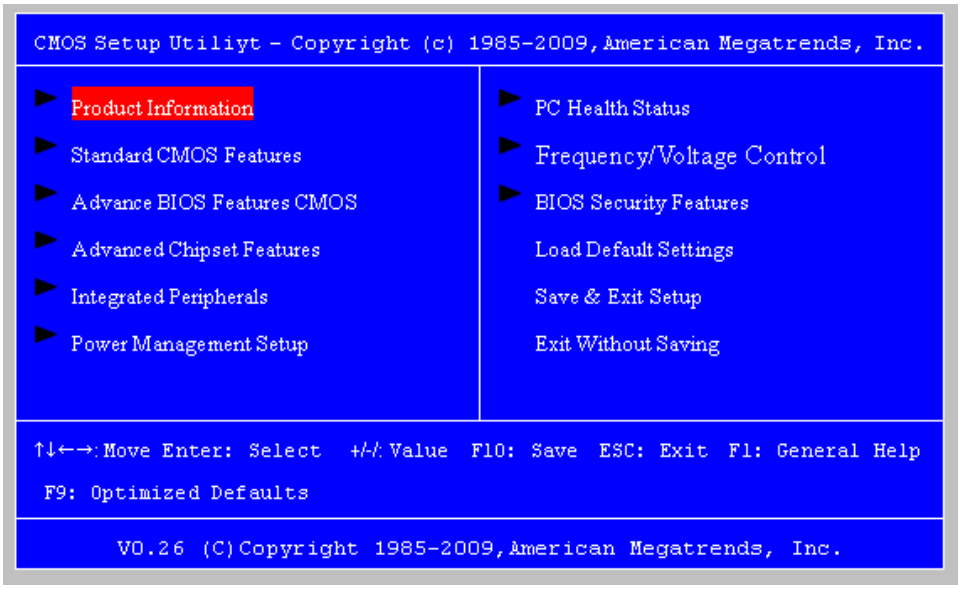
Setup Utility Menus


CMOS Setup Utiliyt – Copyright (c) 1985-2009, American Megatrends, Inc.
Product Information
Standard CMOS Features
Advance BIOS Features CMOS
Advanced Chipset Features
Integrated Peripherals
Power Management Setup
PC Health Status
Frequency/Voltage Control
BIOS Security Features
Load Default Settings
Save & Exit Setup
Exit Without Saving
↑↓←→: Move Enter: Select +/-/: Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults
V0.26 (C) Copyright 1985-2009, American Megatrends, Inc.

The Setup Main menu includes the following main setup categories.

Parameter	Description
Product Information	This page shows the relevant information of the main board
Standard CMOS Features	This setup page includes all the items in standard compatible BIOS
Advance BIOS Features CMOS	This setup page includes all the items of Award special enhanced features
Advanced Chipset Features	This setup page includes all advanced chipset features
Integrated Peripherals	This setup page includes all onboard peripherals
Power Management Setup	This setup page includes all the items of Green function features
PC Health Status	This setup page is the System auto detect Temperature, voltage, and fan speed
Frequency/Voltage Control	This setup page is the System Frequency setup
BIOS Security Features	Change, set or disable password. It allows you to limit access to the System
Load Default Setting	Load Default Setting indicates the value of the system parameters which the system would be in best performance configuration
Save & Exit Setup	Save CMOS value settings to CMOS and exit setup
Exit Without Saving	Abandon all CMOS value changes and exit setup

In the descriptive table following each of the menu screenshots, settings in **boldface** are the default and suggested settings.

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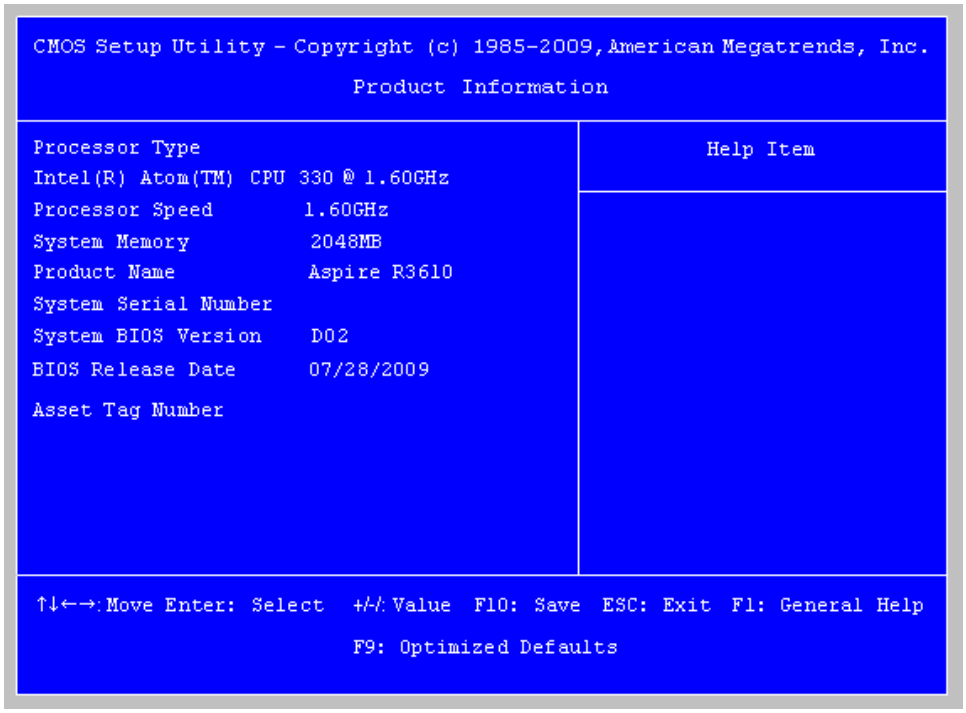
Product Information

The Product Information menu displays basic information about the system. These entries are for your reference only and are not user-configurable.


CMOS Setup Utility – Copyright (c) 1985-2009, American Megatrends, Inc.
Product Information
Processor Type
Intel(R) Atom(TM) CPU 330 @ 1.60GHz
Processor Speed 1.60GHz
System Memory 2048MB
Product Name Aspire R3610
System Serial Number
System BIOS Version D02
BIOS Release Date 07/28/2009
Asset Tag Number
Help Item
↑↓←→: Move Enter: Select +/-/: Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description
Processor Type	Type of CPU installed on the system.
Processor Speed	Speed of the CPU installed on the system.
System Memory	Total size of system memory installed on the system.
Product Name	Product name of the system.
System Serial Number	Serial number of the system.
System BIOS Version	Version number of the BIOS setup utility.
BIOS Release Date	Date when the BIOS setup utility was released
Asset Tag Number	Asset tag number of this system.

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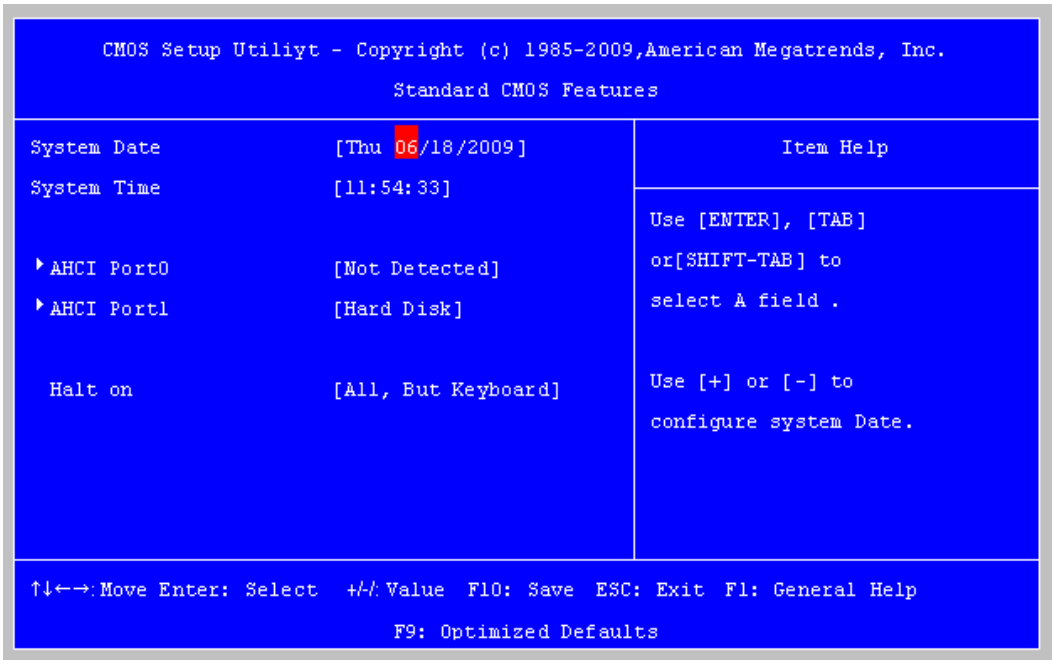
Standard CMOS Features


CMOS Setup Utiliyt - Copyright (c) 1985-2009,American Megatrends, Inc.
Standard CMOS Features
System Date [Thu 06/18/2009]
System Time [11:54:33]
AHCI Port0 [Not Detected]
AHCI Port1 [Hard Disk]
Halt on [All, But Keyboard]
Item Help
Use [ENTER], [TAB] or[SHIFT-TAB] to select A field .
Use [+] or [-] to configure system Date.
↑↓←→:Move Enter: Select +/-/:Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description	Option
System Date	Set the date following the weekday-month-day-year format.	
System Time	Set the system time following the hour-minute-second format.	
AHCI Port 0/1	Press Enter to view detailed device information.	
Halt On	Determines whether the system will stop for an error during the POST.	**All, But Keyboard** No Errors All Errors

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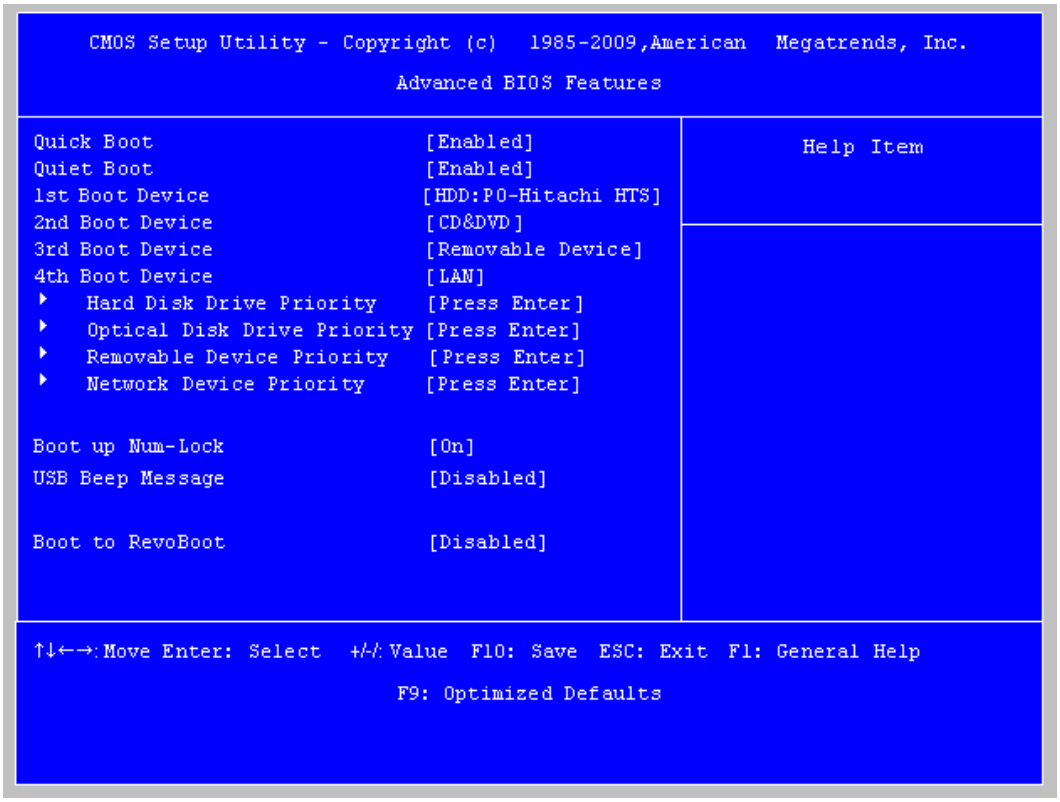
Advanced BIOS Feature


CMOS Setup Utility - Copyright (c) 1985-2009,American Megatrends, Inc.
Advanced BIOS Features
Quick Boot [Enabled]
Quiet Boot [Enabled]
1st Boot Device [HDD:P0-Hitachi HTS]
2nd Boot Device [CD&DVD]
3rd Boot Device [Removable Device]
4th Boot Device [LAN]
Hard Disk Drive Priority [Press Enter]
Optical Disk Drive Priority [Press Enter]
Removable Device Priority [Press Enter]
Network Device Priority [Press Enter]
Boot up Num-Lock [On]
USB Beep Message [Disabled]
Boot to RevoBoot [Disabled]
Help Item
↑↓←→:Move Enter: Select +/-/: Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description	Option
Quick Boot	Allows you to decrease the time it takes to boot the computer by shortening or skipping certain standard booting process.	**Enabled** Disabled
Quiet Boot	When enabled, the BIOS splash screen displays during startup. When disabled, the diagnostic screen displays during startup.	**Enabled** Disabled
1st/2nd/3rd/4th Boot Device	Specifies the boot order from the available devices.	Hard Disk CD^DVD Removable Device LAN
Hard Disk Drive Priority	Press **Enter** to access the Hard Disk Drive Priority submenu and specify the boot device priority sequence from available hard drives.	
Optical Disk Drive Priority	Press **Enter** to access the Optical Disk Drive Priority submenu and specify the boot device priority sequence from available CD/DVD drives.	
Removable Device Priority	Press **Enter** to access the Removable Device Priority submenu and specify the boot device priority sequence from available removable drives.	
Boot up Num-Lock	Selects power on state for Num Lock.	**On** Off
USB Beep Message	Enables or disables BIOS to display error beeps or messages during USB device enumeration.	**Disabled** Enabled

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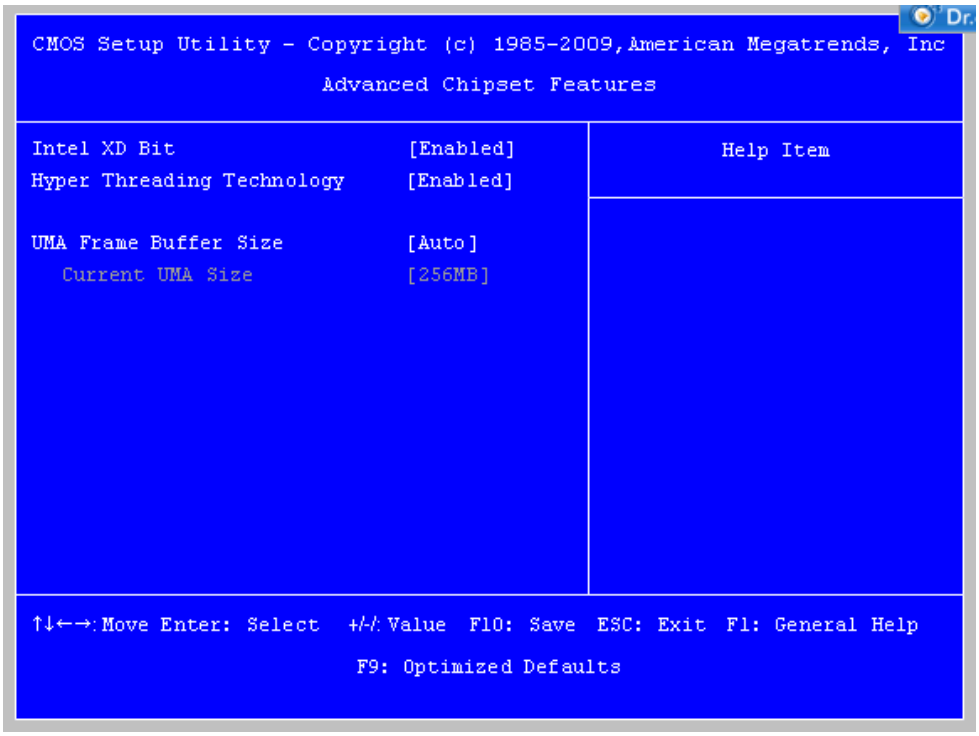
Advanced Chipset Features


CMOS Setup Utility – Copyright (c) 1985-2009, American Megatrends, Inc
Advanced Chipset Features
Intel XD Bit [Enabled]
Hyper Threading Technology [Enabled]
UMA Frame Buffer Size [Auto]
Current UMA Size [256MB]
Help Item
↑↓←→: Move Enter: Select +/-/: Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description	Option
Intel XD Bit	When enabled, the processor disables code execution when a worm attempts to insert a code in the buffer preventing damage and worm propagation. When disabled, the processor forces the Execute Disable (XD) Bit feature flag to always return to 0.	**Enabled** Disabled
Hyper Threading Technology	For Intel platform	**Enabled** Disabled

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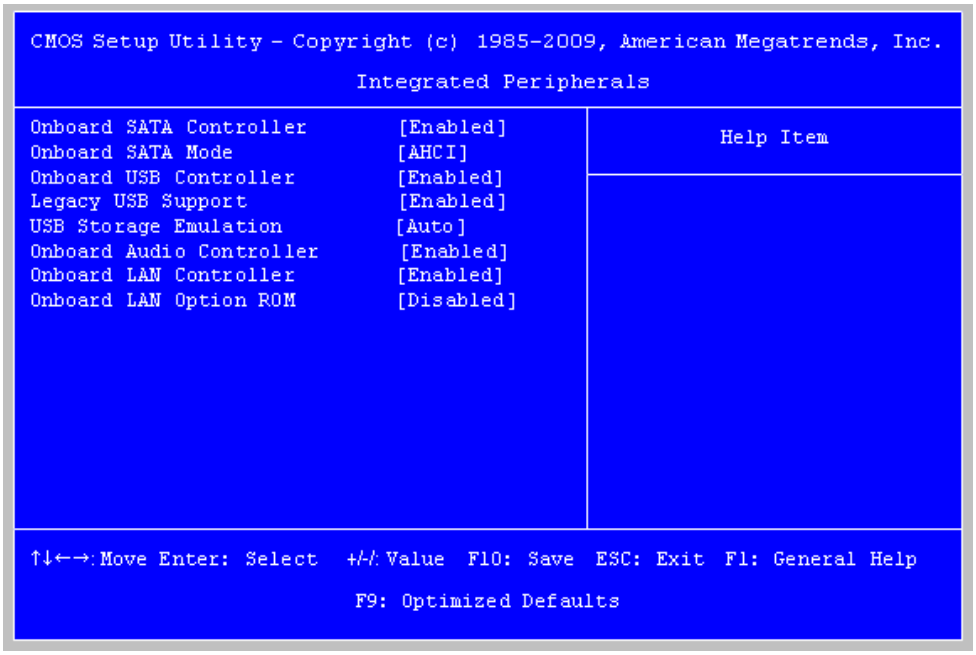
Integrated Peripherals


CMOS Setup Utility - Copyright (c) 1985-2009, American Megatrends, Inc.
Integrated Peripherals
Onboard SATA Controller [Enabled]
Onboard SATA Mode [AHCI]
Onboard USB Controller [Enabled]
Legacy USB Support [Enabled]
USB Storage Emulation [Auto]
Onboard Audio Controller [Enabled]
Onboard LAN Controller [Enabled]
Onboard LAN Option ROM [Disabled]
Help Item
↑↓←→: Move Enter: Select +/-/: Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description	Option
Onboard SATA Controller	Enables or disables the onboard SATA controller.	Enabled Disabled
Onboard SATA Mode	Select an operating mode for the onboard SATA.	RAID Native IDE
Onboard USB Controller	Enables or disables the onboard USB controller.	**Enabled** Disabled
Legacy USB Support	Enables or disables support for legacy USB devices.	**Enabled** Disabled
Onboard Audio Controller	Enables or disables the onboard audio controller.	**Enabled** Disabled
Onboard LAN Controller	Enables or disables the onboard LAN controller.	**Enabled** Disabled
Onboard LAN Option ROM	Enables or disables the load of embedded option ROM for onboard network controller.	**Enabled** Disabled

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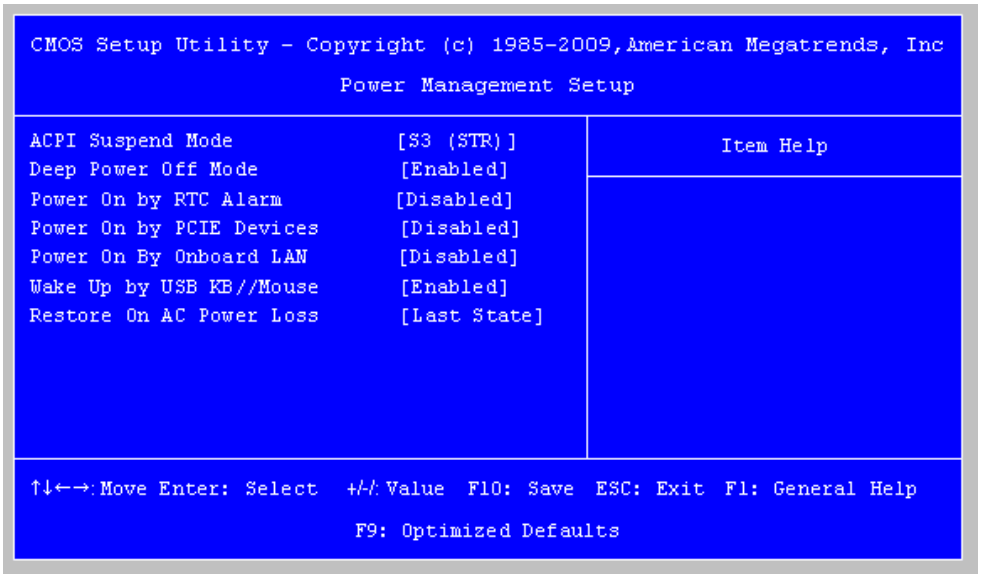
Power Management Setup


CMOS Setup Utility – Copyright (c) 1985-2009, American Megatrends, Inc
Power Management Setup
ACPI Suspend Mode [S3 (STR)]
Deep Power Off Mode [Enabled]
Power On by RTC Alarm [Disabled]
Power On by PCIE Devices [Disabled]
Power On By Onboard LAN [Disabled]
Wake Up by USB KB//Mouse [Enabled]
Restore On AC Power Loss [Last State]
Item Help
↑↓←→: Move Enter: Select +/-/: Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description	Option
ACPI Suspend Mode	Select an ACPI state.	**S3 (STR)** S1 (POS)
Deep Power off Mode	Enables or disables the Deep power off mode	**Enabled** Disabled
Power On by RTC Alarm	Enables or disables to wake up the system by time setting	**Enabled** Disabled
Power On by PCIE Devices	Enables or disables to wake up the system from a power saving mode through an event on PCI Express device.	**Enabled** Disabled
Power On by Onboard Lan	Enables or Disables to wake up the system by Onboard Lan function	**Enabled** Disabled
Wake Up by USB KB/ Mouse	If enabled, press any key or click the mouse will wake system from S1/ S3 state.	**Enabled** Disabled
Restore On AC Power Loss	Enables or disables the system to reboot after a power failure or interrupt occurs.	**Power Off** Power On Last State

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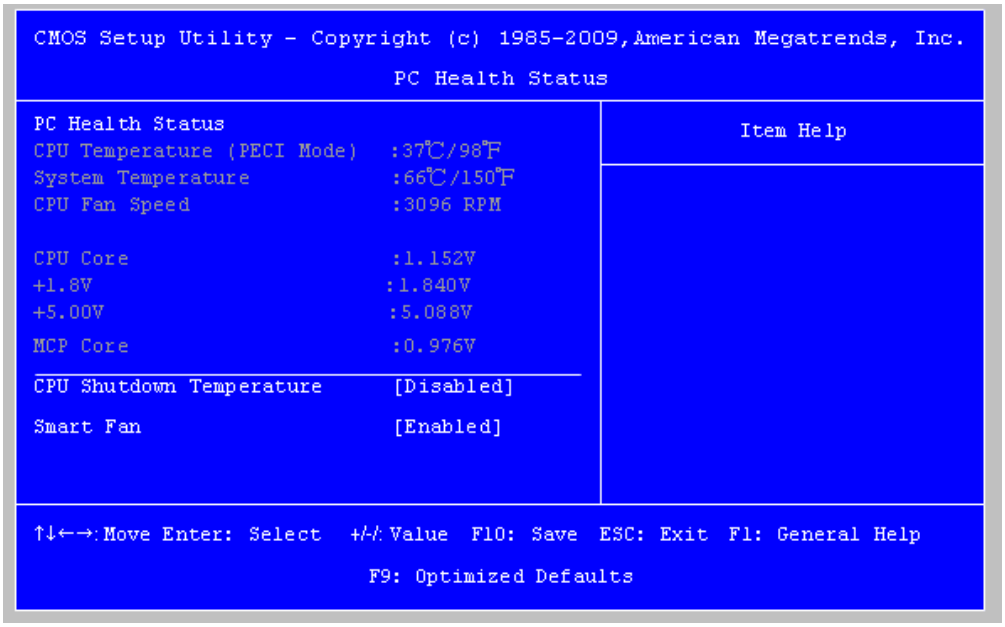
PC Health Status


CMOS Setup Utility - Copyright (c) 1985-2009,American Megatrends, Inc.
PC Health Status
PC Health Status
CPU Temperature (PECI Mode) :37℃/98℉
System Temperature :66℃/150℉
CPU Fan Speed :3096 RPM
CPU Core :1.152V
+1.8V :1.840V
+5.00V :5.088V
MCP Core :0.976V
CPU Shutdown Temperature [Disabled]
Smart Fan [Enabled]
Item Help
↑↓←→:Move Enter: Select +/-/: Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description	Option
CPU Shutdown Temperature	Enables or disables the system shutdown when the system is over hot.	**Enabled** Disabled
Smart FAN	Enables or disables the smart system fan control function.	**Enabled** Disabled

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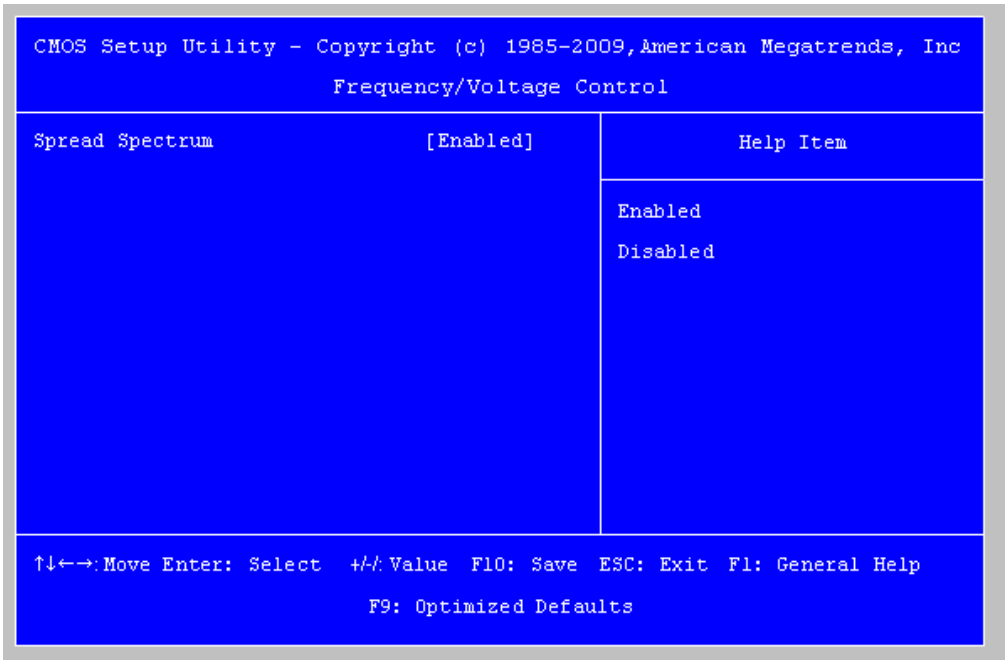
Frequency/Voltage Control


CMOS Setup Utility - Copyright (c) 1985-2009,American Megatrends, Inc
Frequency/Voltage Control
Spread Spectrum [Enabled]
Help Item
Enabled
Disabled
↑↓←→:Move Enter: Select +/-/:Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description	Option
Spread Spectrum	Enables or disables the reduction of the mainboard's EMI. Note: Remember to disable the Spread Spectrum feature if you are overclocking. A slight jitter can introduce a temporary boost in clock speed causing the overclocked processor to lock up.	**Enabled** Disabled

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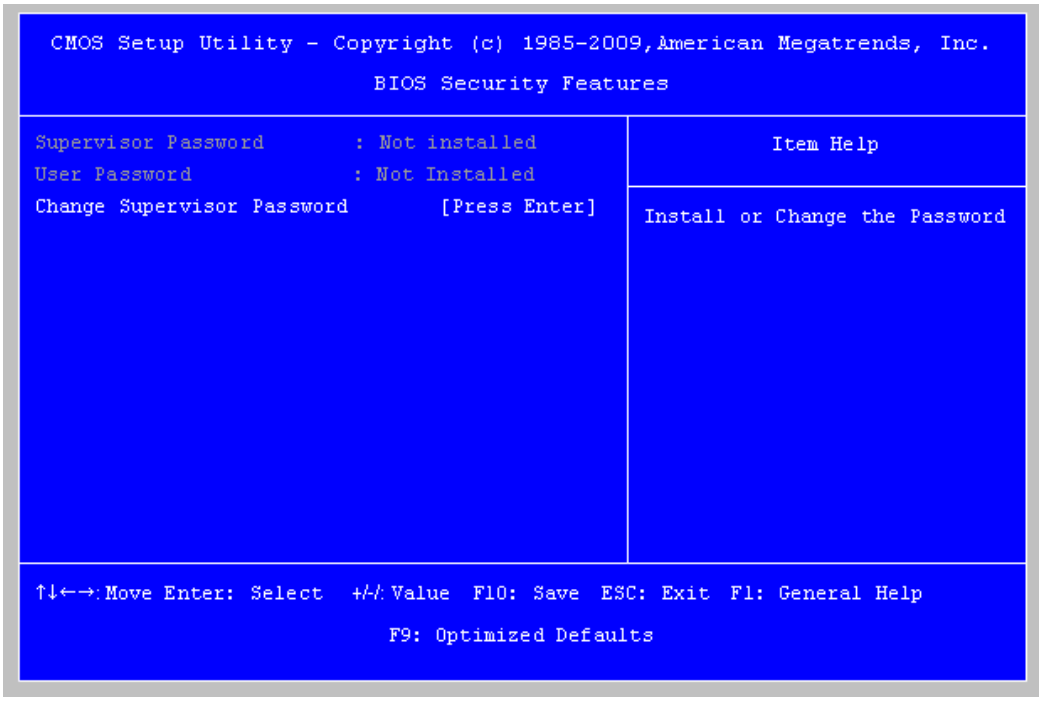
BIOS Security Features


CMOS Setup Utility - Copyright (c) 1985-2009,American Megatrends, Inc.
BIOS Security Features
Supervisor Password : Not installed
User Password : Not Installed
Change Supervisor Password [Press Enter]
Item Help
Install or Change the Password
↑↓←→:Move Enter: Select +/-/: Value F10: Save ESC: Exit F1: General Help
F9: Optimized Defaults

Parameter	Description
Supervisor Password	Indicates the status of the supervisor password.
User Password	Indicates the status of the user password.
Change Supervisor Password	Supervisor password prevents unauthorized access to the BIOS Setup Utility. Press **Enter** to change the Supervisor password.

Setting a supervisor password

1. Use the up/down arrow keys to select Change Supervisor Password menu then press **Enter**.

   A password box will appear.
2. Type a password then press **Enter**.

   The password may consist up to six alphanumeric characters (A-Z, a-z, 0-9)
3. Retype the password to verify the first entry then press **Enter** again.
4. Press **F10**.
5. Select **Yes** to save the new password and close the Setup Utility.

Changing the supervisor password

1. Use the up/down arrow keys to select Change Supervisor Password menu then press **Enter**.
2. Type the original password then press **Enter**.
3. Type a new password then press **Enter**.
4. Retype the password to verify the first entry then press **Enter** again.
5. Press **F10**.
6. Select **Yes** to save the new password and close the Setup Utility.

Removing a supervisor password

1. Use the up/down arrow keys to select Change Supervisor Password menu then press **Enter**.
2. Enter the current password then press **Enter**.
3. Press **Enter** twice without entering anything in the password fields.

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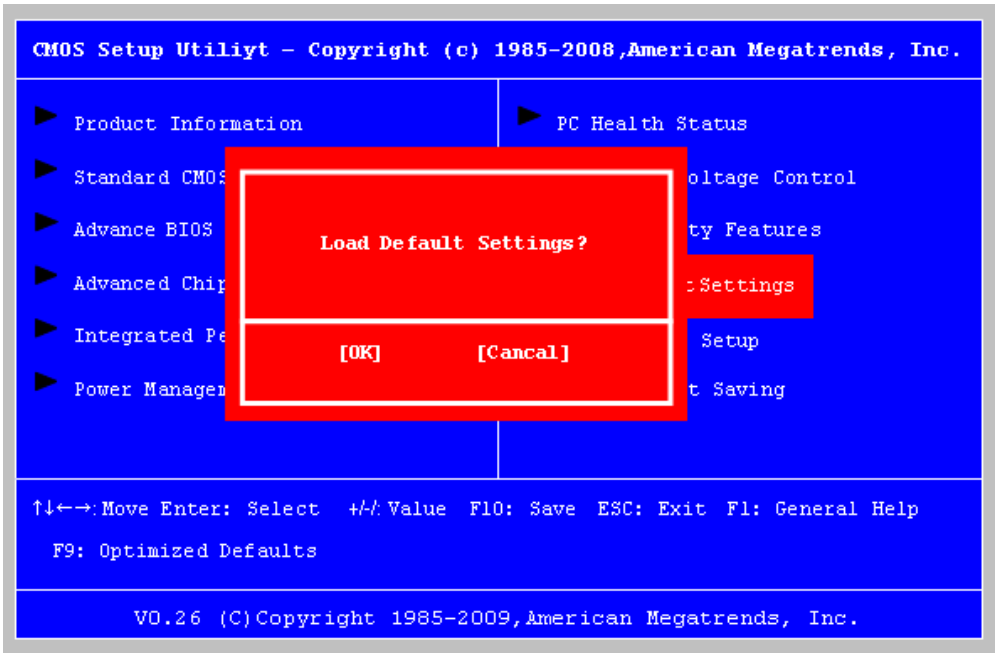
Load Default Settings

The Load Default Settings menu allows you to load the default settings for all BIOS setup parameters. Setup defaults are quite demanding in terms of resources consumption. If you are using low-speed memory chips or other kinds of low-performance components and you choose to load these settings, the system might not function properly.



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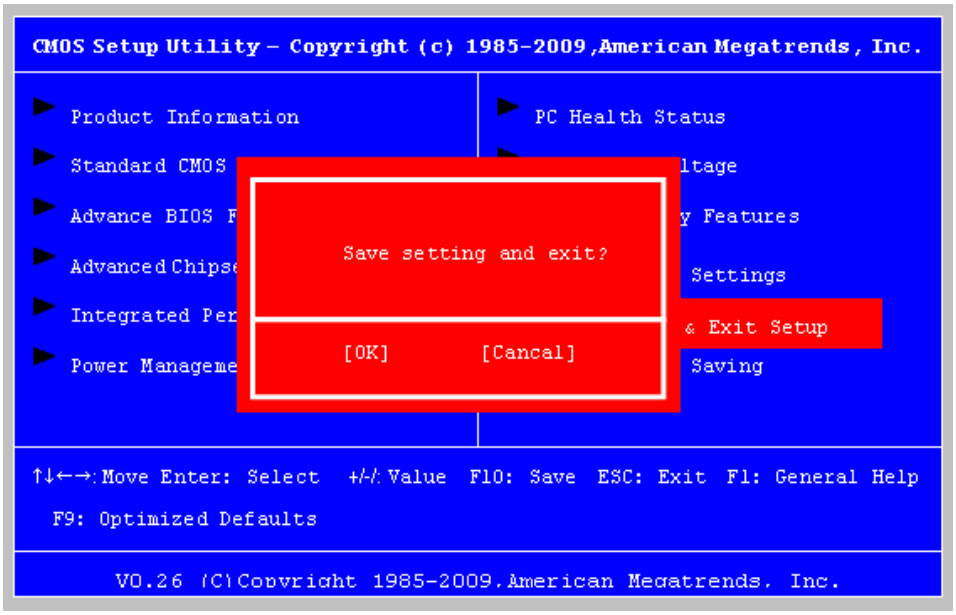
Save & Exit Setup

The Save & Exit Setup menu allows you to save changes made and close the Setup Utility.



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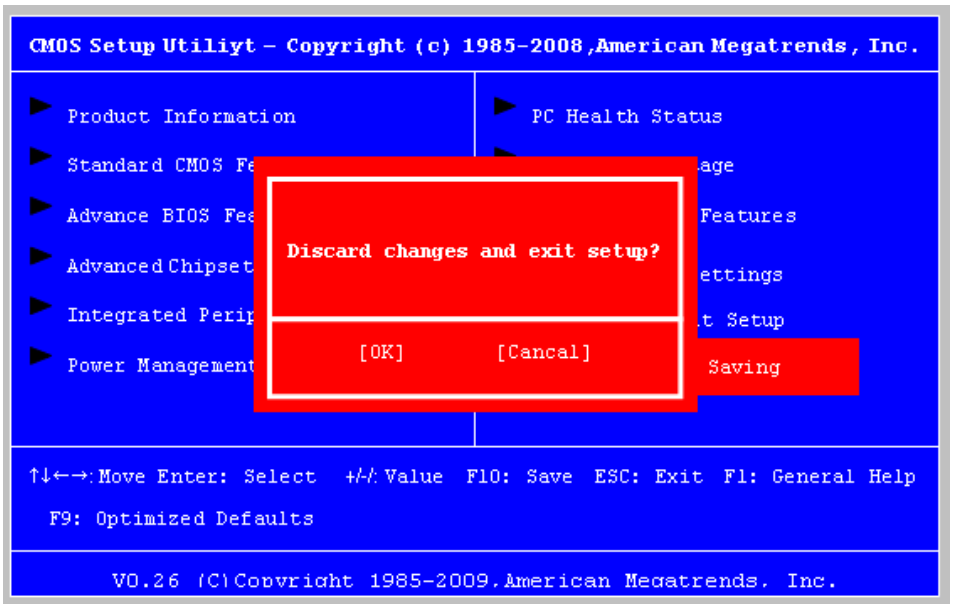
Exit Without Saving

The Exit Without Saving menu allows you to discard changes made and close the Setup Utility.



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System Disassembly

This chapter contains step-by-step procedures on how to disassemble the desktop computer for maintenance and troubleshooting.

Disassembly Requirements

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Flat-blade screwdriver
- Philips screwdriver
- Hex screwdriver
- Plastic flat-blade screwdriver
- Plastic tweezers

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

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Pre-disassembly Procedure

Before proceeding with the disassembly procedure, perform the steps listed below:

1. Turn off the system and all the peripherals connected to it.
2. Unplug the power cord from the power outlets.
3. Unplug the power cord from the system.
4. Unplug all peripheral cables from the system.
5. Place the system unit on a flat, stable surface.

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Removing the Side Panel

1. Put the Computer on the worktable lightly.
2. Release side cover with 1 screws then remove side cover.

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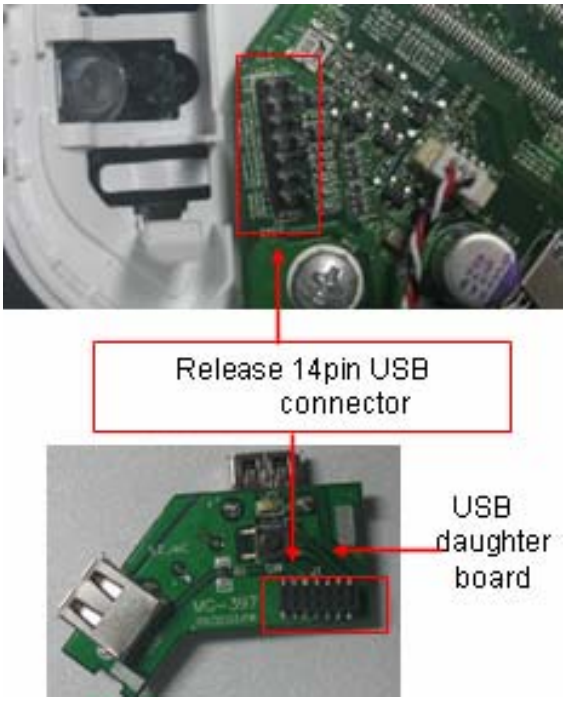
Removing Front D/B

1. Use hand to loosen both sides the clasp.
2. Lift the D/B away from the main board.



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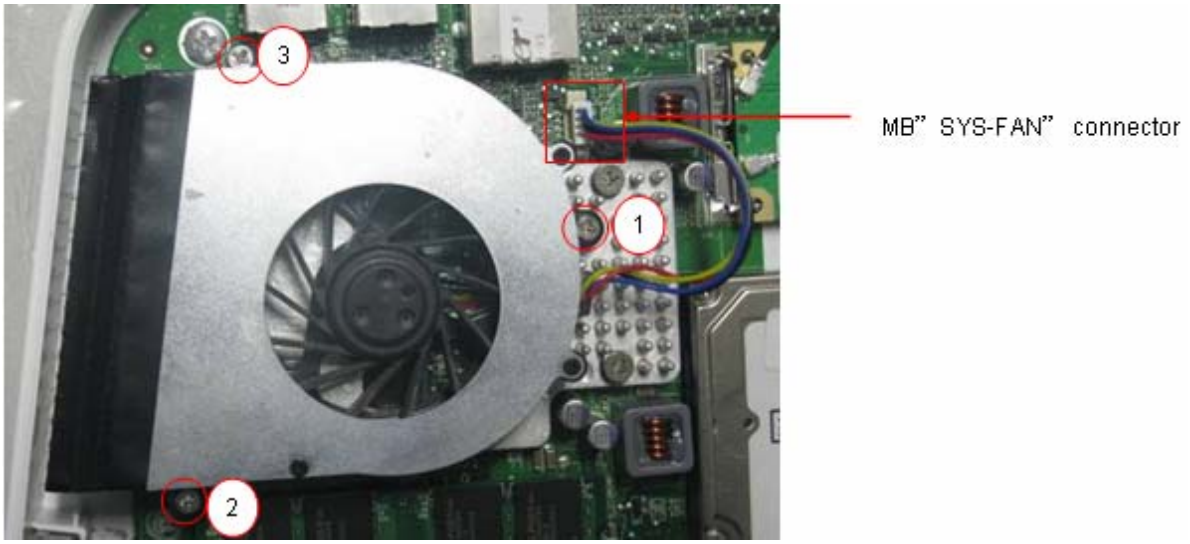
Removing CPU fan

WARNING: The heat sink becomes very hot when the system is on. NEVER touch the heat sink with any metal or with your hands.

1. Use screwdriver to loosen the three screws and disconnect fan cable.
2. Remove CPU fan from CPU cooler.



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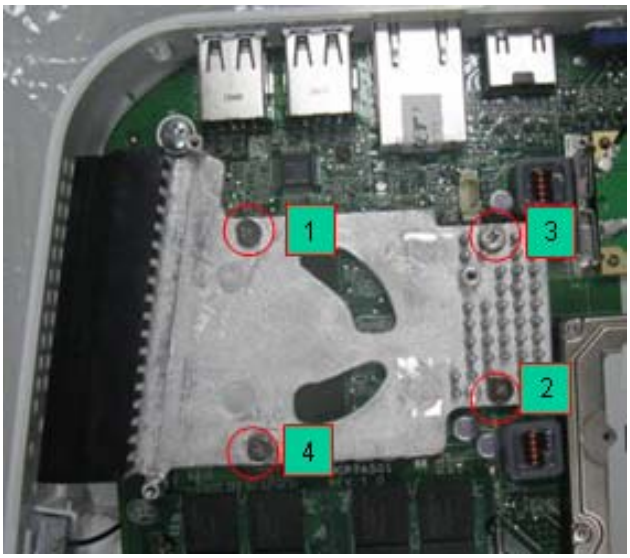
Removing CPU Cooler

WARNING: The heat sink becomes very hot when the system is on. NEVER touch the heat sink with any metal or with your hands.

1. Use screwdriver to loosen the four screws.Remove CPU fan from CPU cooler.



2. Remove CPU cooler.

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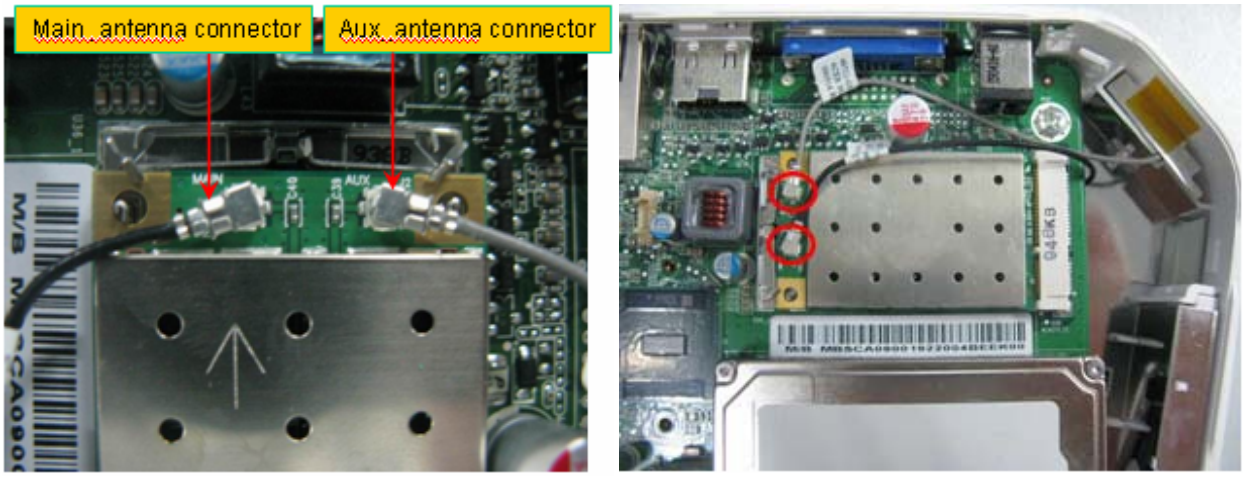
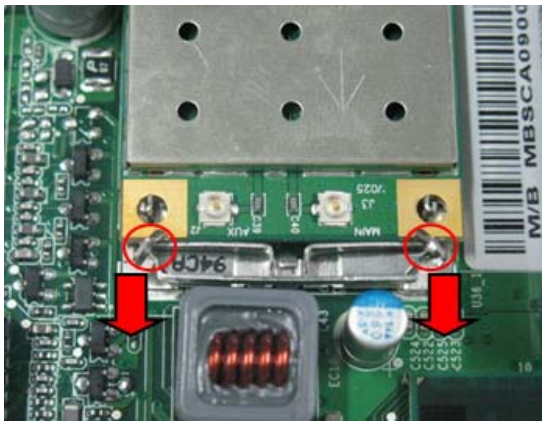
Removing wireless LAN

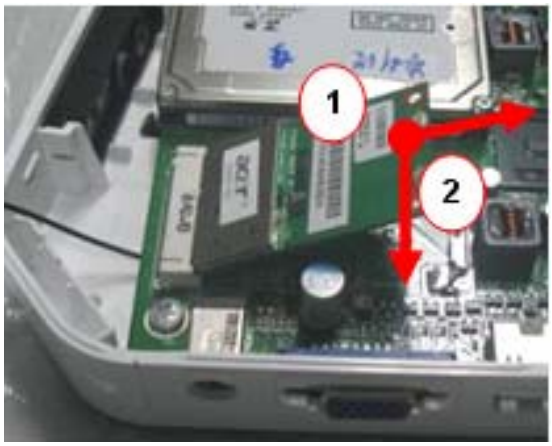
1. Remove wireless LAN antenna cable
   a. Disconnect aux_ antenna cable (gray) from"AUX" connector of wireless LAN?
   b. Disconnect main_ antenna cable (black) from"MAIN" connector.



2. Remove wireless LAN.
   a. Use hand to loosen both sides clip



   b. take off wireless LAN card from M/B MINI-PCIE" connector.



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Removing M/B

1. Remove the four screws that secure the main board to the chassis.
2. Lift the board from the chassis.

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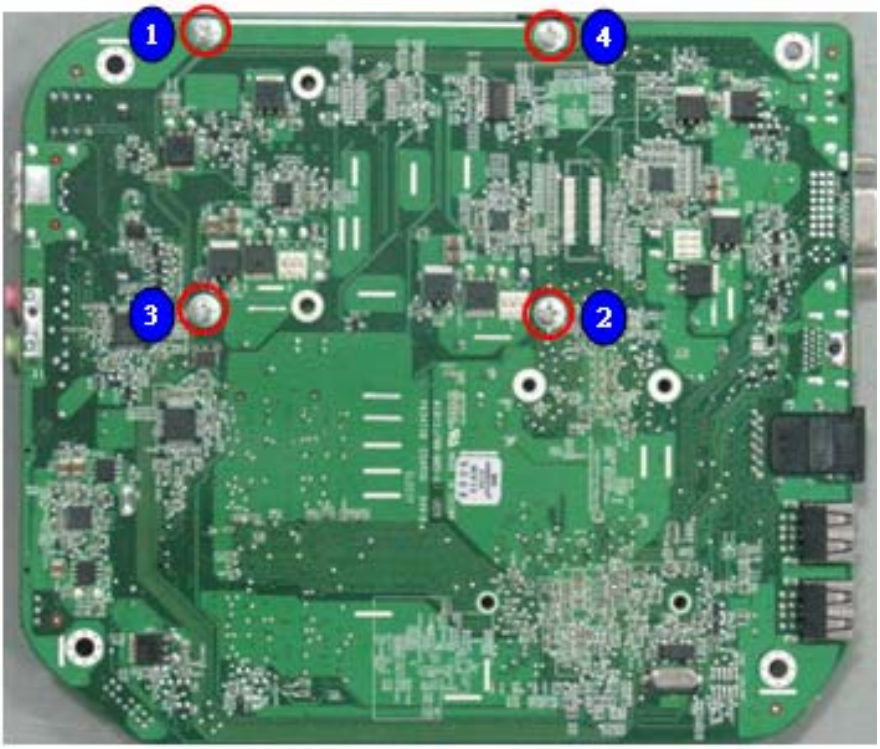
Removing the Hard Disk Drive

1. Use screwdriver to loosen the four screws.



2. Remove HDD from Main board.

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Removing Memory

.

1. Remove Memory from SODIMM.
2. Remove the second Memory from SODIMM2 (Optional by SKU).

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Chapter 4

System Troubleshooting

This chapter provides instructions on how to troubleshoot system hardware problems.

Hardware Diagnostic Procedure

Please refer to generic troubleshooting guide for troubleshooting information relating to following topics:

- Power-On Self-Test (POST)
- POST Error Messages List
- Error Symptoms List
- Undetermined Problems

Power-On Self-Test (POST)

Each time you turn on the system, the Power-on Self Test (POST) is initiated. Several items are tested during POST, but is for the most part transparent to the user.

The Power-On Self Test (POST) is a BIOS procedure that boots the system, initializes and diagnoses the system components, and controls the operation of the power-on password option. If POST discovers errors in system operations at power-on, it displays error messages on screen, generates a check point code at port 80h or even halts the system if the error is fatal.

The main components on the main board that must be diagnosed and/or initialized by POST to ensure system functionality are as follows:

- Microprocessor with built-in numeric co-processor and cache memory subsystem
- Direct Memory Access (DMA) controller
- Interrupt system
- Three programmable timers
- ROM subsystem
- RAM subsystem
- CMOS RAM subsystem and real time clock/calendar with battery backup
- Onboard parallel interface controller
- Embedded hard disk interface and one diskette drive interface
- Keyboard and auxiliary device controllers
- 1.44M floppy controller
- I/O ports
  - One parallel port
  - One PS/2-compatible mouse port
  - One PS/2-compatible keyboard port

NOTE: When Post executes a task, it uses a series of preset numbers called check points to belatched atport 80h, indicating the stages it is currently running. This latch can be read and shown on a debug board.The following table describes the BIOS common tasks carried out by POST. Each task is denoted by an unique check point number. For other unique check point numbers that are not listed in the table, refer to the corresponding product service guide.

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Post Checkpoints List: The list may vary accordingly depending on your BIOS

Checkpoint	Description
CFh	Test CMOS R/W functionality
C0h	Early chipset initialization: -Disable shadow RAM
	-Disable L2 cache (socket 7 or below) -Program basic chipset registers
C1h	Detect memory
	-Auto-detection of DRAM size, type and ECC.
	-Auto-detection of L2 cache (socket 7 or below)
C3h	Expand compressed BIOS code to DRAM
C5h	Call chipset hook to copy BIOS back to E000 & F000 shadow RAM.
01h	Expand the Xgroup codes locating in physical address 1000:0
02h	Reserved
03h	Initial Superio_Early _Init switch
04h	Reserved
05h	1. Blank out screen 2. Clear CMOS error flag
06h	Reserved
07h	1. Clear 8042 interface 2. Initialize 8042 self-test
08h	1. Test special keyboard controller for Winbond 977 series Super I/O chips. 2. Enable keyboard interface.
09h	Reserved
0Ah	1. Disable PS/2 mouse interface (optional) 2. Auto detect ports for keyboard & mouse followed by a port & interface swap (optional). 3. Reset keyboard for Winbond 977 series Super I/Q chips.
0Bh	Reserved
0Ch	Reserved
0Dh	Reserved
0Eh	Test F000h segment shadow to see whether it is R/W-able or not. If test fails, keep beeping the speaker.
0Fh	Reserved
10h	Auto detect flash type to load appropriate flash R/W codes into the run time area in F000 for ESCD & DMI support.
11h	Reserved
12h	Use walking 1??s algorithm to check out interface in CMOS circuitry. Also set real-time clock power status, and then check for override.
13h	Reserved

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Checkpoint	Description
14h	Program chipset default values into chipset. Chipset default values are MODBINable by OEM customers.
15h	Reserved
16h	Initial Early_Init_Onboard_Generator switch.
17h	Reserved
18h	Detect CPU information including brand, SMI type (Cyrix or Intel) and CPU level (586 or 686)
19h	Reserved
1Ah	Reserved
1Bh	Initial interrupts vector table. If no special specified, all H/W interrupts are directed to SPURIOUS_INT_HDLR & S/W interrupts to PURIOUS_soft_HDLR.
1Ch	Reserved
1Dh	Initial Early_PM_INIT switch.
1Eh	Reserved
1Fh	Load keyboard matrix (notebook platform)
20h	Reserved
21h	HPM initialization (notebook platform)
22h	Reserved
3Ch	Test 8254.
3Dh	Reserved
3Eh	Test 8259 interrupt mask bits for channel 1
3Fh	Reserved
40h	Test 8259 interrupt mask bits for channel 2
41h	Reserved
42h	Reserved
43h	Test 8259 functionality
44h	Reserved
45h	Reserved
46h	Reserved
47h	Initialize EISA slot
48h	Reserved
49h	1. Calculate total memory by testing the last double word of each 64K. 2. Program writes allocation for AMD K5 CPU.
4Ah	Reserved
4Bh	Reserved

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Checkpoint	Description
4Ch	Reserved
4Dh	Reserved
4Eh	1. Program MTRR of M1 CPU. 2. Initialize L2 cache for P6 class CPU & program CPU with proper cacheable range. 3. Initialize the APIC for P6 class CPU. 4. On MP platform, adjust the cacheable range to smaller one in case the cacheable ranges between each CPU are not identical.
4Fh	Reserved
50h	Initialize USB
51h	Reserved
52h	Test all memory (clear all extended memory to 0)
53h	Reserved
54h	Reserved
55h	Display number of processors (multi-processor platform)
56h	Reserved
57h	1. Display PnP logo 2. Early ISA PnP initialization -Assign CSN to every ISA PnP device.
58h	Reserved
59h	Initialize the combined Trend Anti-Virus code.
5Ah	Reserved
5Bh	(Optional Feature) Show message for entering AWDFLASH.EXE from FDD (optional)
5Ch	Reserved
5Dh	1. Initialize Init_Onboard_Super_IO switch. 2. Initialize Init_Onboard_AUDIO switch.
5Eh	Reserved
5Fh	Reserved
60h	Okay to enter Setup utility; i.e. not until this POST stage can users enter the CMOS setup utility.
61h	Reserved
62h	Reserved
63h	Reserved
64h	Reserved
65h	Initialize PS/2 Mouse
66h	Reserved
67h	Prepare memory size information for function call: INT 15h ax=E820h
68h	Reserved

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Checkpoint	Description
69h	Turn on L2 cache
6Ah	Reserved
6Bh	Program chipset registers according to items described in Setup& Auto configuration table.
6Ch	Reserved
6Dh	1. Assign resources to all ISA PnP devices. 2. Auto assign ports to onboard COM ports if the corresponding item in Setup is set to "AUTO"
6Eh	Reserved
6Fh	1. Initialize floppy controller 2. Set up floppy related fields in 40: hardware.
70h	Reserved
71h	Reserved
72h	Reserved
73h	(Optional Feature) Enter AWDFLASH.EXE if: -AWDFLASH is found in floppy drive -ALT+F2 is pressed
74h	Reserved
75h	Detect & install all IDE devices: HDD, LS120, ZIP,CDROM....
76h	Reserved
77h	Detect serial ports & parallel ports
78h	Reserved
79h	Reserved
7Ah	Detect & install co-processor
7Bh	Reserved
7Ch	Reserved
7Dh	Reserved
7Eh	Reserved
7Fh	1. Switch back to text mode if full screen logo is supported. -If errors occur, report errors & wait for keys -If no errors occur or F1 key is pressed to continue: Clear EPA or customization logo.
80h	Reserved
81h	Reserved
82h	1. Call chipset power management hook. 2. Recover the text fond used by EPA logo (not for full screen logo) 3. If password is set, ask for password.
83h	Save all data in stack back to CMOS.
84h	Initialize ISA PnP boot devices.

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Checkpoint	Description
85h	1. USB final Initialization 2. NET PC: Build SYSID structure 3. Switch screen back to text mode. 4. Set up ACPI table at top of memory. 5. Invoke ISA adapter ROMs. 6. Assign IRQs to PCI devices 7. Initialize APM 8. Clear noise of IRQs
86h	Reserved
87h	Reserved
88h	Reserved
89h	Reserved
90h	Reserved
91h	Reserved
92h	Reserved
93h	Read HDD boot sector information for Trend Anti-Virus code
94h	1. Enable L2 cache 2. Program boot up speed 3. Chipset final initialization 4. Power management final initialization 5. Clear screen & display summary table 6. Program K6 write allocation 7 Program P6 class write combining.
95h	1. Program daylight saving 2. Update keyboard LED & typematic rate
96h	1. Build MP table 2. Build & update ESCD 3. Set CMOS century to 20h or 19h 4. Load CMOS time into DOS timer tick 5. Build MSIRQ routing table
FFh	Boot attempt (INT 19h)

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POST Error Messages List

If you cannot run the diagnostics program tests but did receive a POST error message, use "POST Error Messages List" to diagnose system problems. If you did not receive any error message, look for a description of your error symptoms in "Error Symptoms List"

NOTE: When you have deemed it necessary to replace an FRU, and have done so, you must run a total system check to ensure that no other activity has been affected by the change. This system check can be done through the diagnostics program.

NOTE: Check all power supply voltages, switch, and jumper settings before you replace the main board. Also check the power supply voltages if you have a "system no-power" condition.

If you are unable to correct the problem by using the "BIOS Messages List" table and "Error Symptoms List" table, go to "Undetermined Problems".

To diagnose a problem, first find the BIOS error messages in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause.

BIOS Messages	Action/FRU
BIOS ROM checksum error - System halted	The checksum of the BIOS code in the BIOS chip is incorrect, indicating the BIOS code may have become corrupt. Contact your system dealer to replace the BIOS.
CMOS Battery Failed	The CMOS battery is no longer functional. Contact your system dealer for a replacement the BIOS.
CMOS Checksum Error- defaults loaded	Checksum of CMOS is incorrect, so the system loads the default equipment configuration. A checksum error may indicate that CMOS has become corrupt. A weak battery may have caused this error. Check the battery and replace if necessary.
CPU at nnnn	Displays the running speed of CPU.
Display switch is set incorrectly	The display switch on the motherboard can be set to either monochrome or color. This message indicates the switch is set to a different setting than indicated in Setup. Determine which setting is correct, and then either turn off the system and change the jumper, or enter Setup and change the Video selection.
Press ESC to skip memory test	The user may press Esc to skip the full memory test.
Floppy disk(s) fail	Cannot find or initialize the floppy drive controller or the drive. Make sure the controller is installed correctly, if no floppy drives are installed, be sure the Diskette Drive selection in Setup is set to NONE or AUTO.
HARD DISK initializing - Please wait a moment	Some hard drives require extra time to initialize.
HARD DISK INSTALL FAILURE	Cannot find or initialize the hard drive controller or the drive. Make sure the controller is installed correctly. If no hard drives are installed, be sure the Hard Drive Selection in Setup is set to NONE.

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BIOS Messages	Action/FRU
Hard disk(s) diagnosis fail	The system may run specific disk diagnostic routines. This message appears if one or more hard disks return an error when the diagnostics run.
Keyboard Error Or No Keyboard Present	Cannot initialize the keyboard. Make sure the keyboard is attached correctly and no keys are pressed during POST. To purposely configure the system without a keyboard, set the error halt condition in Setup to HALT ON ALL, BUT KEYBOARD. The BIOS then ignores the missing keyboard during POST.
Keyboard is locked out - Unlock the key	This message usually indicates that one or more keys have been pressed during the keyboard tests. Be sure no objects are resting on the keyboard.
Memory Test:	This message displays during a full memory test, counting down the memory areas being tested.
Memory test fail	If POST detects an error during memory testing, additional information appears giving specifics about the type and location of the memory error.
Override enabled - Defaults loaded	If the system cannot boot using the current CMOS configuration, the BIOS can override the current configuration with a set of BIOS defaults designed for the most stable, minimal-performance system operations.
Press TAB to show POST screen	System OEMs may replace the Phoenix Technologies Award BIOS POST display with their own proprietary display. Including this message in the OEM display permits the operator to switch between the OEM display and the default POST display.
Primary master hard disk fail	POST detects an error in the primary master IDE hard drive.
Primary slave hard disk fail	POST detects an error in the secondary master IDE hard drive.
Secondary master hard disk fail	POST detects an error in the primary slave IDE hard drive.
Secondary slave hard disk fail	POST detects an error in the secondary slave IDE hard drive.

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Error Symptoms List

NOTE: To diagnose a problem, first find the error symptom in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/ FRU listed in right column is the most likely cause.

Error Symptom	Action/FRU
Processor / Processor Fan	
NOTE: Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems.	
Processor fan does not run but power supply fan runs.	1. Ensure the system is not in power saving mode.See “Power Management”in chapter2. 2.With the system power on, measure the voltage of processor fan connector. Its reading should be +12Vdc. Its reading should be +12Vdc. If the reading shows normal, but the fan still does not work, then replace a good fan. 3. Main board.
Processor test failed.	1.Processor. 2.Main board.
Main board and Memory	
NOTE: Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems.	
Memory test failed.	1.See "Memory" 2.Main board
Incorrect memory size shown or repeated during POST.	1.Insert the memory modules in the DIMM sockets properly, then reboot the system. 2.Memory module. 3.Main board.
System works but fails to enter power saving mode when the Power Management Mode is set to Enabled.	1.Enter BIOS Setup and load default settings.In Windows Systems, check settings in Power Management Property of Control Panel. 2.Reload software from Recovery CD.
Blinking cursor only; system does not work.	1.Diskette/IDE drive connection/cables 2. Diskette/IDE disk drives 3.See “Undetermined Problems”. 4.Main board
Diskette Drive	
NOTE: Ensure the diskette drive is auto-setting in BIOS Setup and its read/write head is clean before diagnosing any diskette drive problems.(If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)	
Media and drive are mismatched.	1.Ensure the diskette drive is configured correctly in the Disk Drives of BIOS Setup. 2.Ensure the diskette drive is correctly formatted. 3.Diskette drive connection/cable 4.Diskette drive 5.Main board

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Error Symptom	Action/FRU
Diskette drive does not work.	1.Ensure the diskette drive is not set to None in the Disk Drives of BIOS Setup. 2.Diskette drive power 3.Diskette drive connection/cable 4.Diskette drive 5.Main board
Diskette drive read/write error.	1.Diskette. 2.Diskette drive cable. 3.Diskette drive. 4.Main board
Diskette drive LED comes on for more than 2 minutes when reading data.	1.Diskette 2.Diskette drive connection/cable 3.Diskette drive 4.Main board
Diskette drive LED fails to light, and the drive is unable to access for more than 2 minutes.	1.Diskette 2.Diskette drive power 3.Diskette drive connection/cable 4.Diskette drive 5.Main board
Diskette drive test failed.	1.Diskette 2.Diskette drive 3.Diskette drive cable 4.Main board
Hard Disk Drive	
NOTE: Ensure hard disk drive is configured correctly in BIOS Setup, cable/jumper are set correctly before diagnosing any hard disk drive problems. (If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)	
Hard disk drive test failed.	1.Enter BIOS Setup and Load default settings. 2.Hard disk drive cable. 3.Hard disk drive. 4. Main board.
Hard disk drive cannot format completely.	1.Enter BIOS Setup and Load default settings. 2.Hard disk drive cable. 3.Hard disk drive. 4.Main board
Hard disk drive has write error.	1.Enter BIOS Setup and Load default settings. 2.Hard disk drive.
Hard disk drive LED fails to light, but system operates normally.	1.With the system power on, measure the voltage of hard disk LED connector. 2.Hard drive LED cable.
CD/DVD-ROM Drive	
NOTE: Ensure CD/DVD-ROM drive is configured correctly in BIOS Setup, cable/jumper are set correctly and its laser beam is clean before diagnosing any CD/DVD-ROM drive problems.	

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Error Symptom	Action/FRU
CD/DVD-ROM drive LED doesn't come on but works normally.	1.CD/DVD-ROM drive
CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off. Software asks to reinstall disc.Software displays a reading CD/DVD error.	1.CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc. 2. CD/DVD-ROM is not inserted properly. 3.CD/DVD-ROM is damaged.
CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held.	1.Disconnect all cables from CD/DVD-ROM drive except power cable, then press eject button to try to unload the disk. 2.CD/DVD-ROM drive power. 3.CD/DVD-ROM drive
CD/DVD-ROM drive does not read and there are no messages are displayed.	1.CD may have dirt or foreign material on it. Check with a known good disc. 2.Ensure the CD/DVD-ROM driver is installed properly. 3.CD/DVD-ROM drive.
CD/DVD-ROM drive can play audio CD but no sound output.	1.Ensure the headphone jack of the CD/DVD-ROM has an output. 2.Turn up the sound volume. 3.Speaker power/connection/cable. 4.CD/DVD-ROM drive.
Real-time clock	
Real-time clock is inaccurate.	1.Ensure the information in the Standard CMOS Feature of BIOS Setup is set correctly. 2.RTC battery. 3.Main board.
Audio	
Audio software program invokes but no sound comes from speakers.	1.Speaker power/connection/cable.
Modem	
Modem ring cannot wake up system from suspend mode.	1.For the External Modem, make sure Power on By Ring in BIOS Setup or Power Management is set to Enabled. For the PCI modem, make sure Wake up by PCI card is set to Enabled. 2.If PCI modem card is used, reinsert the modem card to PCI slot firmly or replace the modem card. 3.In Win 98, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax.
Data/fax modem software program invokes but cannot receive/send data/fax	1.Ensure the modem card is installed properly.
Fax/voice modem software program invokes but has no sound output. (Data files are received normally; voice from modem cannot be produced, but system sound feature works normally.)	1.Ensure the modem voice-in cable from modem adapter card to main board
Video and Monitor	

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Error Symptom	Action/FRU
Video memory test failed.Video adapter failed.	1.Remove all non-factory-installed cards. 2.Load default settings (if screen is readable). 3.Main board
Display problem: -Incorrect colors No high intensity Missing, broken, or incorrect characters Blank monitor (dark) Blank monitor (bright) Distorted image Unreadable monitor	1.Monitor signal connection/cable. 2.Monitor 3.Video adapter card 4.Main board
Other monitor problems	
Display changing colors.	1.Monitor signal connection/cable 2.Monitor 3.Main board
Display problem not listed above (including blank or illegible monitor).	1.”Monitor" 2.Load default settings (if screen is readable). 3.Main board
Parallel/Serial Ports	
Execute “Load BIOS Default Settings” in BIOS Setup to confirm ports presence before diagnosing any parallel/serial ports problems.	
Serial or parallel port loop-back test failed.	1.Make sure that the LPT# or COM# you test is the same as the setting in BIOS Setup. 2.Loop-back. 3.Main board
Printing failed.	1.Ensure the printer driver is properly installed. Refer to the printer service manual. 2.Printer. 3.Printer cable. 4.Main board.
Printer problems.	1.Refer to the service manual for the printer.
Keyboard	
Some or all keys on keyboard do not work.	1.Keyboard
Power Supply	
Pressing power switch does not turn off system. (Only unplugging the power cord from electrical outlet can turn off the system.)	1.Ensure the Soft-off by PWR-BTTN. in BIOS Setup of Power Management is not set to Instant-off. 2.Power switch cable assembly
Pressing power switch does not turn on the system.	1.Ensure the power override switch (situated at the back of the machine, just above the connector for the power cable) is not set to OFF. 2.Power switch cable assembly.

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Error Symptom	Action/FRU
Executing software shutdown from Windows98 Start menu does not turn off the system. (Only pressing power switch can turn off the system).	1.Load default settings. 2.Reload software from Recovery CD.
No system power, or power supply fan is not running.	1.Power Supply 2.Main board
Other Problems	
Any other problems.	1.Undetermined Problems

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Undetermined Problems

If an error message is present, go to "POST Error Messages List" on page 85. If you did not receive any messages, if the symptom is listed in "or "Error Symptoms List" on page 87. If you still cannot solve the problem, continue with this check:

1. Check the power supply voltage. If the voltage are correct continue with the following steps:
2. Power off the system unit.
3. Perform the following checks, one by one, until you have isolated the problem FRU.
4. Load default settings in setup.
5. Check all main board jumper positions and switch settings.
6. Check all adapter card jumper positions.
7. Check all device jumper positions.
8. Check all cables and connectors for proper installation.
9. If the jumpers, switches and voltage settings are correct, remove or disconnect the following, one at a time:
10. Non-Acer devices
    - External devices
    - Any adapter card (modem card, LAN card or video card, if installed)
    - CD/DVD-ROM drive
    - Diskette drive
    - Hard disk drive
    - DIMM
    - Processor
    - Main board
11. Power on the system unit.
12. Repeat steps 2 through 5 until you find the failing device or adapter.

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Jumper and Connector Information

Jumper Setting

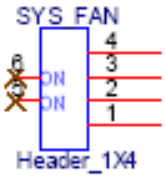
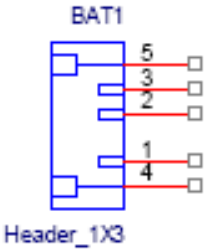
The section explains how to set jumper for correct configuration of the mainboard.

Setting Jumper

Use the motherboard jumpers to set system configuration options. Jumpers with more Than one pin are numbered. When setting the jumpers, ensure that the jumper caps are Placed on the correct pins.

System Board Jumper Setting

1. System Board Jumper Setting

Jumper/Header Name	Function	Definition
SYS_FAN (4 PIN) 	SYSTEM FAN HEADER	1: GND 2: +5V 3: SENSE 4. PWM CONTROL
CLR_CMOS 	CLEAR CMOS HEADER	1-2: CLEAR CMOS 2-3: NORMAL (Default)
BAT1(3 PIN) 	BATTERY HEADER	1: Battery power output 2: RTC_SENSE# 3-5: GND

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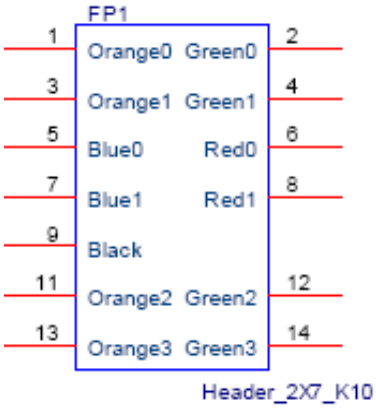
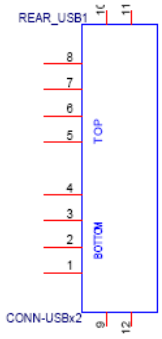
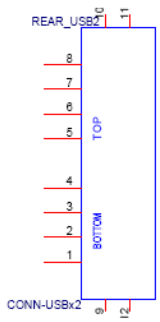
Jumper/Header Name	Function	Definition
FP1 	Front panel header	1: GND 2: F_USBPWR 3: USB_P5+ 4: USB_P5- 5: GND 6: F_USBPWR* 7: USB_P4+ 8: USB_P4- 9: FP_9(PU 5V_S0) 10: KEY 11: PWRBTNJ 12: LEDP 13: GND 14: PMSLED

2. USB CONNECTORS (Stacked)(Black)

a. REAR_USB1, REAR_USB2



Pin	Signal Name
1,5	USB_REAR_PWR
2	USB_0_FBJ
3	USB_0_FB
6	USB_2_FBJ
7	USB_2_FB
4,8,9,10,11,12	GND



Pin	Signal Name
1,5	USB_REAR_PWR
2	USB_1_FBJ
3	USB_1_FB
6	USB_3_FBJ
7	USB_3_FB
4,8,9,10,11,12	GND

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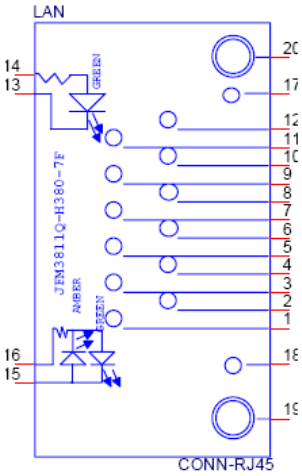
b. LAN1



Pin	Signal Name
3,6,9,12	PHY_VDD33
17,18	GND
1	MDI0+
2	MDI0-
4	MDI1+
5	MDI1-
7	MDI2+
8	MDI2-
10	MDI3+
11	MDI3-
19,20	IO_GND
14	LAN_LINK_LED+
13	LAN_LINK_LED-
15	LINK_1000_LEDJ
16	LINK_100_LEDJ

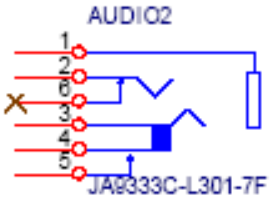
NOTE: Pins 1-12 for RJ-45 LAN Jack pin definition, 13-16 for LAN LED definition

3. Audio Back Panel Connectors (Vertical)

a. AUDIO1 (MIC IN /Pink in Color)

Pin	Signal Name
1	GND
2	MIC1_L2
3	MIC1_R5
4	MIC1-JD
5	FRONT-IO-SENSE1
6	NC

b. AUDIO2 (LINE OUT /Lime in Color)



Pin	Signal Name
1	GND
2	LINE_OUT_L2
3	LINE_OUT_R5
4	FRONT-JD
5	FRONT-IO-SENSE2
6	NC

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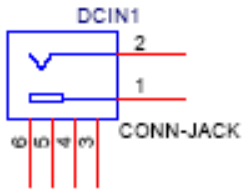
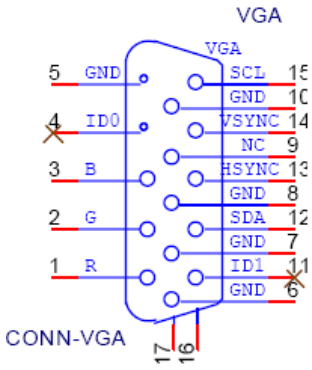
c. DCIN



Pin	Signal Name
1	DCIN
2	GND
3	GND
4	GND
5	GND
6	GND

d. VGA(D-SUB)



Pin	Signal Name
1	DACR
2	DACG
3	DACB
4	NC
5	GND
6	GND
7	GND
8	GND
9	VGA_POWER
10	GND
11	NC
12	SPD2_VGA
13	HSYNC_C
14	VSYNC_C
15	SPCLK2_VGA
16	GND
17	GND

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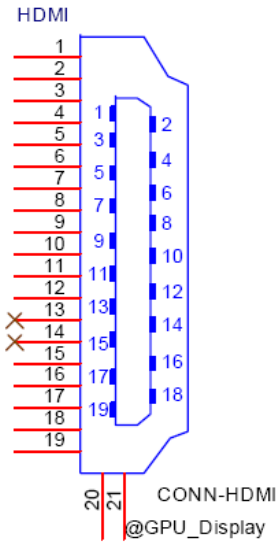
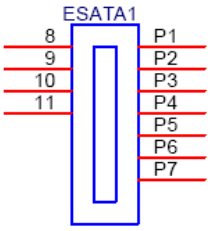
e. HDMI



Pin	Signal Name
1	TX2+
2	GND
3	TX2-
4	TX1+
5	GND
6	TX1-
7	TX0+
8	GND
9	TX0-
10	TXC+
11	GND
12	TXC-
13	NC
14	NC
15	SPCLK2_5V
16	SPDAT2_5V
17	GND
18	5V_HDMI
19	DVI2_HPD
20	GND
21	GND

f. eSATA CONN



Pin	Signal Name
P1	GND
P2	SATA_A0_TX_P_C
P3	SATA_A0_TX_N_C
P4	GND
P5	SATA_A0_RX_N_C
P6	SATA_A0_RX_P_C
P7	GND
8	GND
9	GND
10	GND
11	GND

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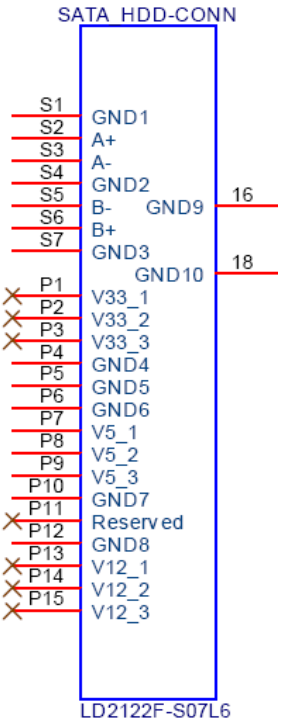
g. SATA CONN



Pin	Signal Name
S1	GND
S2	STXP_0
S3	STXN_0
S4	GND
S5	SRXN_0
S6	SRXP_0
S7	GND
P1	NC
P2	NC
P3	NC
P4	GND
P5	GND
P6	GND
P7	5V_S0
P8	5V_S0
P9	5V_S0
P10	GND
P11	NC
P12	GND
P13	NC
P14	NC
P15	NC

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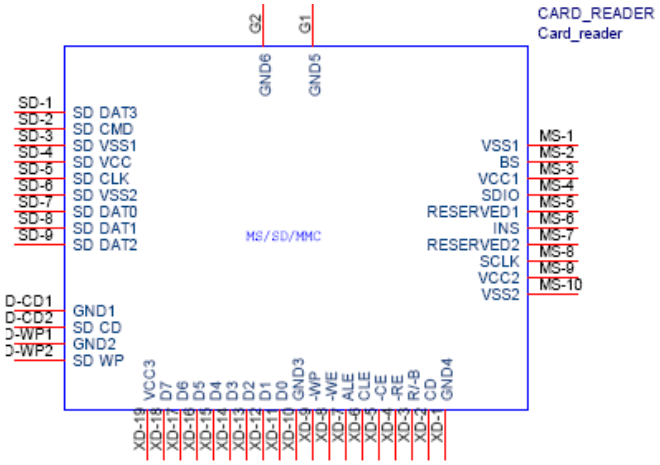
h. Card reader



Pin	Signal Name	Pin	Signal Name
SD-1	SD_DAT3	MS-10	GND
SD-2	SD_CMD	G1	GND
SD-3	GND	G2	GND
SD-4	CARD_3V3	XD-1	GND
SD-5	SD_CLK	XD-2	XD_CD#
SD-6	GND	XD-3	XD_RDY
SD-7	MS_SD_DAT0	XD-4	XD_RE#
SD-8	SD_DAT1	XD-5	XD_CE#
SD-9	SD_DAT2	XD-6	XD_CLE
SD-CD1	GND	XD-7	XD_ALE
SD-CD2	SD_CD#	XD-8	XD_WE#
SD-WP1	GND	XD-9	XD_WP#
SD-WP2	SD_WP	XD-10	GND
MS-1	GND	XD-11	XD_D0
MS-2	MS_BS	XD-12	XD_D1
MS-3	MS_D1	XD-13	XD_D2
MS-4	MS_SD_DAT0	XD-14	XD_D3
MS-5	MS_D2	XD-15	XD_D4
MS-6	MS_INS#	XD-16	XD_D5
MS-7	MS_D3	XD-17	XD_D6
MS-8	CR_CLK	XD-18	XD_D7
MS-9	CARD_3V3	XD-19	CARD_3V3

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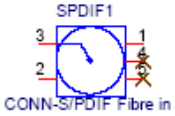
i. Spidif



Pin	Signal Name
P1	GND
P2	5V_SYS
P3	SPDIF_OUT
P4	NC
P5	NC

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Chapter 6

FRU (Field Replaceable Unit) List

This chapter offers the FRU (Field Replaceable Unit) list in global configuration of the Aspire R3610 desktop computer. Refer to this chapter whenever ordering the parts to repair or for RMA (Return Merchandise Authorization).

NOTES:

- When ordering FRU parts, check the most up-to-date information available on your regional web or channel. For whatever reasons a part number is changed, it will NOT be noted on the printed Service Guide. For Acer authorized service providers, your Acer office may have a different part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for service.
- To scrap or to return the defective parts, follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.
- This document will be updated as more information about the FRU list becomes available.

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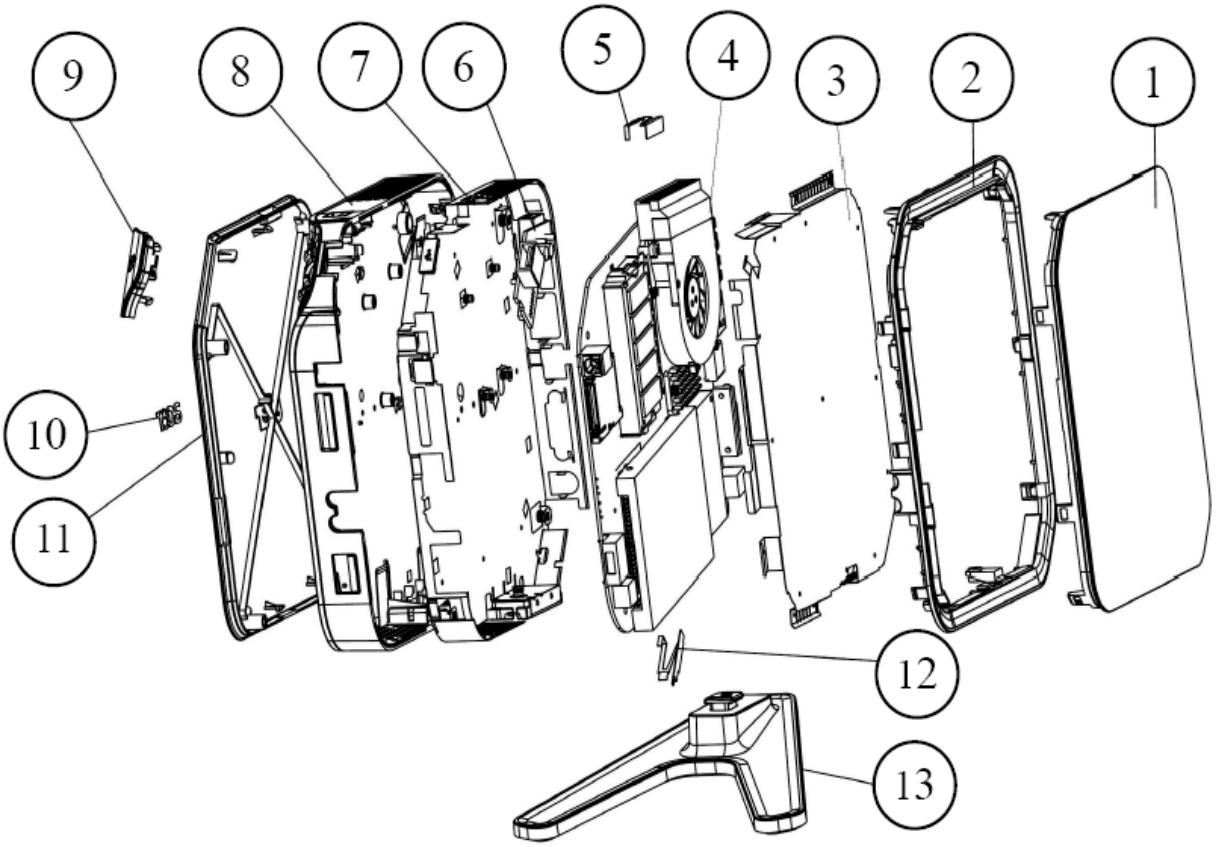
Aspire R3610 Exploded Diagram

NOTE: This section will be updated when more information becomes available.



NO	PART NO	QTY	NO	PART NO	QTY
1	Bot-cover	1	8	01-Main-base	1
2	Cover-pannel	1	9	POWER-BUTTON	1
3	SHEETMETAL-TOP	1	10	2009_Acer	1
4	ACER-1L-MB-LOYOUT	1	11	Top-Cover	1
5	ANTENNA_P_7	1	12	ANTENNA_B_8	1
6	1L-Power-Switch	1	13	V-STAND	1
7	SHEETMETAL-BOT	1			

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Aspire R3610 FRU List

Category	Description	Part Number
MB		
	Mainboard R3610 nVidia Proprietary LF MCP7A-ION,W/ eSATA, W/ HDMI,S/PDIF ,Atom330	MB.SCX09.001
Cooler		
	w/i 7012 blower (for Atom 230)	HI.10800.038
	Hornet a/p/g N330 FXN PKP710G w/i sunon fan	HI.10800.043
Memory		
	so-DIMM GU331G0ALEPR612C6CE/DDRII800/ 1GB	KN.1GB0H.010
	Memory NANYA SO-DIMM DDRII 800 1GB NT1GT64UH8D0FN-AD LF 64*16 0.07um	KN.1GB03.025
	GU332G0ALEPR8H2C6CE/DDRII800/2GB	KN.2GB0H.003
	Memory NANYA SO-DIMM DDRII 800 2GB NT2GT64U8HD0BN-AD LF 128*8 0.07um	KN.2GB03.010
	Memory SAMSUNG SO-DIMM DDRII 800 1GB M470T2864EH3-CF7 LF 64*16 0.055um	KN.1GB0B.033
	Memory UNIFOSA SO-DIMM DDRII 800 1GB GU331G0ALEPR612C6F1 LF 128*8 0.065um	KN.1GB0H.014
	Memory SAMSUNG SO-DIMM DDRII 800 2GB M470T5663EH3-CF7 LF 128*8 0.055um	KN.2GB0B.018
	Memory UNIFOSA SO-DIMM DDRII 800 2GB GU332G0ALEPR8H2C6F1 LF 128*8 0.065um	KN.2GB0H.008
HDD (SATA)		

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Category	Description	Part Number
	HGST 2.5" 5400rpm 160GB HTS543216L9A300 Falcon-B SATA LF F/W:C40C	KH.16007.019
	SEAGATE 2.5" 5400rpm 160GB ST9160310AS Crockett SATA LF F/W:0303	KH.16001.034
	WD 2.5" 5400rpm 160GB WD1600BEVT-22ZCTO ML160 SATA LF F/W:11.01A11	KH.16008.022
	HDD HGST 2.5" 5400rpm 250GB HTS545025B9A300 Panther B SATA LF F/ W:C60F	KH.25007.015
	HDD SEAGATE 2.5" 5400rpm 250GB ST9250315AS Wyatt SATA LF F/W:0001SDM1	KH.25001.016
	HDD WD 2.5" 5400rpm 250GB WD2500BEVT-22ZCT0 ML160 SATA LF F/W:11.01A11	KH.25008.021
	HDD WD 2.5" 5400rpm 320GB WD3200BEVT-22ZCT0 ML160 SATA LF F/W:11.01A11	KH.32008.013
	HDD HGST 2.5" 5400rpm 320GB HTS545032B9A300 Panther B SATA LF F/W: C60F	KH.32007.007
	HDD WD 2.5" 5400rpm 500GB WD5000BEVT-22ZAT0 ML250 SATA LF F/W:01.01A01	KH.50008.013
	HDD HGST 2.5" 5400rpm 500GB HTS545050B9A300 Panther B SATA LF F/ W:C60F	KH.50007.009
Modem		
	VD56UL, Modem USB dongle 56K modem	FX.10100.001
Wireless		
	Foxconn 802.11 b/g/n WLAN mini-card Atheros XB91 (mini-card), 1Tx2R	NI.10200.012
	Foxconn T60H976.11 Atheros XB63 WLAN Foxconn T60H976.11 Atheros XB63 WLAN Atheros PCI-Express WLAN 8	NI.10200.026
Adapter		
	65W	AP.06501.026
	65W (level 5) - HP-A0652R3B 2LF	AP.0650A.014
RF Mouse		

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Category	Description	Part Number
	Chicony Mouse RF2.4 MGR0919 with Receiver	MS.11200.052
USB Optical Mouse		
	mouse USB M-U0005	MS.11200.047
Speaker		
	Neosonica mini speaker USB White	SP.10600.028
webcam		
	webcam+stand	PC.13400.035
air mouse + controller(game pad)		
	Cywee 3D stick mouse Mouse Z	MS.11200.053
Mounting		
	1L Hornet Mounting kit for a/p/g	PC.13400.041
Remote controller		
	EMEA Vista RC	RT.11300.009
	EMEA Vista MCE	RT.11300.005
	US Vista MCE	RT.11300.006
	TC Vista MCE	RT.11300.007
	SC Vista MCE	RT.11300.008
receiver		

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Category	Description	Part Number
	Receiver w/o IR Blaster	RV.11000.007
	Receiver w/ IR Blaster	RV.11000.014
USB Keyboard		
	Keyboard CHICONY KU-0906 USB 104KS White US	KB.USB03.154
	Keyboard CHICONY KU-0906 USB 104KS White Traditional Chinese	KB.USB03.155
	Keyboard CHICONY KU-0906 USB 104KS White Simplified Chinese	KB.USB03.156
	Keyboard CHICONY KU-0906 USB 104KS White US International	KB.USB03.157
	Keyboard CHICONY KU-0906 USB 104KS White Arabic/English	KB.USB03.158
	Keyboard CHICONY KU-0906 USB 104KS White Thailand	KB.USB03.159
	Keyboard CHICONY KU-0906 USB 105KS White Spanish	KB.USB03.160
	Keyboard CHICONY KU-0906 USB 105KS White Portuguese	KB.USB03.161
	Keyboard CHICONY KU-0906 USB 105KS White Canadian French	KB.USB03.162
	Keyboard CHICONY KU-0906 USB 105KS White Brazilian Portuguese	KB.USB03.163
	Keyboard CHICONY KU-0906 USB 109KS White Japanese	KB.USB03.164
	Keyboard CHICONY KU-0906 USB 105KS White German	KB.USB03.165
	Keyboard CHICONY KU-0906 USB 105KS White Italian	KB.USB03.166
	Keyboard CHICONY KU-0906 USB 105KS White French	KB.USB03.167
	Keyboard CHICONY KU-0906 USB 105KS White Swedish	KB.USB03.168
	Keyboard CHICONY KU-0906 USB 105KS White UK	KB.USB03.169

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Category	Description	Part Number
	Keyboard CHICONY KU-0906 USB 105KS White Dutch	KB.USB03.170
	Keyboard CHICONY KU-0906 USB 105KS White Swiss/G	KB.USB03.171
	Keyboard CHICONY KU-0906 USB 105KS White Belgium	KB.USB03.172
	Keyboard CHICONY KU-0906 USB 105KS White Icelandic	KB.USB03.173
	Keyboard CHICONY KU-0906 USB 105KS White Norwegian	KB.USB03.174
	Keyboard CHICONY KU-0906 USB 104KS White Hebrew	KB.USB03.175
	Keyboard CHICONY KU-0906 USB 105KS White Polish	KB.USB03.176
	Keyboard CHICONY KU-0906 USB 105KS White Slovenian	KB.USB03.177
	Keyboard CHICONY KU-0906 USB 105KS White Slovak	KB.USB03.178
	Keyboard CHICONY KU-0906 USB 104KS White Russian	KB.USB03.179
	Keyboard CHICONY KU-0906 USB 105KS White Hungarian	KB.USB03.180
	Keyboard CHICONY KU-0906 USB 104KS White Greek	KB.USB03.181
	Keyboard CHICONY KU-0906 USB 105KS White Danish	KB.USB03.182
	Keyboard CHICONY KU-0906 USB 104KS White Czech	KB.USB03.183
	Keyboard CHICONY KU-0906 USB 105KS White Romanian	KB.USB03.184
	Keyboard CHICONY KU-0906 USB 105KS White Turkish	KB.USB03.185
	Keyboard CHICONY KU-0906 USB 105KS White Spanish Latin	KB.USB03.186
	Keyboard CHICONY KU-0906 USB 105KS White Turkish-Q	KB.USB03.187
	Keyboard CHICONY KU-0906 USB 105KS White Arabic/French	KB.USB03.188
	Keyboard CHICONY KU-0906 USB 104KS White Kazakh	KB.USB03.189
	Keyboard CHICONY KU-0906 USB 104KS White Turkmen	KB.USB03.190

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Category	Description	Part Number
	Keyboard CHICONY KU-0906 USB 105KS White Nordic	KB.USB03.191
Wireless KB		
	Keyboard CHICONY KG-0917 RF2.4 104KS White US	KB.RF403.097
	Keyboard CHICONY KG-0917 RF2.4 104KS White Traditional Chinese	KB.RF403.098
	Keyboard CHICONY KG-0917 RF2.4 104KS White Simplified Chinese	KB.RF403.099
	Keyboard CHICONY KG-0917 RF2.4 104KS White US International	KB.RF403.100
	Keyboard CHICONY KG-0917 RF2.4 104KS White Arabic/English	KB.RF403.101
	Keyboard CHICONY KG-0917 RF2.4 104KS White Thailand	KB.RF403.102
	Keyboard CHICONY KG-0917 RF2.4 105KS White Spanish	KB.RF403.103
	Keyboard CHICONY KG-0917 RF2.4 105KS White Portuguese	KB.RF403.104
	Keyboard CHICONY KG-0917 RF2.4 105KS White Canadian French	KB.RF403.105
	Keyboard CHICONY KG-0917 RF2.4 107KS White Brazilian Portuguese	KB.RF403.106
	Keyboard CHICONY KG-0917 RF2.4 109KS White Japanese	KB.RF403.107
	Keyboard CHICONY KG-0917 RF2.4 105KS White German	KB.RF403.108
	Keyboard CHICONY KG-0917 RF2.4 105KS White Italian	KB.RF403.109
	Keyboard CHICONY KG-0917 RF2.4 105KS White French	KB.RF403.110
	Keyboard CHICONY KG-0917 RF2.4 105KS White Swedish	KB.RF403.111
	Keyboard CHICONY KG-0917 RF2.4 105KS White UK	KB.RF403.112
	Keyboard CHICONY KG-0917 RF2.4 105KS White Dutch	KB.RF403.113
	Keyboard CHICONY KG-0917 RF2.4 105KS White Swiss/G	KB.RF403.114
	Keyboard CHICONY KG-0917 RF2.4 105KS White Belgium	KB.RF403.115
	Keyboard CHICONY KG-0917 RF2.4 105KS White Icelandic	KB.RF403.116

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Category	Description	Part Number
	Keyboard CHICONY KG-0917 RF2.4 105KS White Norwegian	KB.RF403.117
	Keyboard CHICONY KG-0917 RF2.4 104KS White Hebrew	KB.RF403.118
	Keyboard CHICONY KG-0917 RF2.4 105KS White Polish	KB.RF403.119
	Keyboard CHICONY KG-0917 RF2.4 105KS White Slovenian	KB.RF403.120
	Keyboard CHICONY KG-0917 RF2.4 105KS White Slovak	KB.RF403.121
	Keyboard CHICONY KG-0917 RF2.4 104KS White Russian	KB.RF403.122
	Keyboard CHICONY KG-0917 RF2.4 105KS White Hungarian	KB.RF403.123
	Keyboard CHICONY KG-0917 RF2.4 104KS White Greek	KB.RF403.124
	Keyboard CHICONY KG-0917 RF2.4 105KS White Danish	KB.RF403.125
	Keyboard CHICONY KG-0917 RF2.4 104KS White Czech	KB.RF403.126
	Keyboard CHICONY KG-0917 RF2.4 105KS White Romanian	KB.RF403.127
	Keyboard CHICONY KG-0917 RF2.4 105KS White Turkish	KB.RF403.128
	Keyboard CHICONY KG-0917 RF2.4 105KS White Spanish Latin	KB.RF403.129
	Keyboard CHICONY KG-0917 RF2.4 105KS White Turkish-Q	KB.RF403.130
	Keyboard CHICONY KG-0917 RF2.4 105KS White Arabic/French	KB.RF403.131
	Keyboard CHICONY KG-0917 RF2.4 104KS White Kazakh	KB.RF403.132
	Keyboard CHICONY KG-0917 RF2.4 104KS White Turkmen	KB.RF403.133
	Keyboard CHICONY KG-0917 RF2.4 105KS White Nordic	KB.RF403.134

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